

4
256

ON THE SURGERY
OF THE KNEE-JOINT

C. B. KEETLEY

M18228



22101654795

The Library of the
Wellcome Institute for
the History of Medicine

A
MEDICAL SOCIETY
OF
LONDON
DEPOSIT

Accession Number

Press Mark

KEETLEY, Charles Bell



ON THE
SURGERY OF THE KNEE-JOINT.

BY THE SAME AUTHOR.
THE STUDENT'S & JUNIOR PRACTITIONER'S
GUIDE TO THE MEDICAL PROFESSION.

SECOND EDITION.

Edited by the AUTHOR and R. WHARRY, M.D.

8vo., pp. 120, price 3s. 6d.

LONDON: BAILLIÈRE, TINDALL AND COX.

AN INDEX OF SURGERY.

BEING A CONCISE CLASSIFICATION OF THE MAIN FACTS
AND THEORIES OF SURGERY FOR THE USE OF
SENIOR STUDENTS AND OTHERS.

FOURTH EDITION.

8vo., pp. 538, price 10s. 6d.

LONDON: SMITH, ELDER AND CO.

IN PREPARATION.

A TREATISE ON ORTHOPÆDIC SURGERY.

ON THE SURGERY
OF
THE KNEE-JOINT,

AND

*THE RESPONSIBILITY PLACED ON THE
PHYSICIAN AND GENERAL PRACTITIONER
BY THE MODERN PROGRESS OF SURGERY;*

BEING THE
INAUGURAL AND RETIRING PRESIDENTIAL ADDRESSES
DELIVERED BEFORE THE WEST LONDON MEDICO-
CHIRURGICAL SOCIETY, ON OCTOBER 7TH, 1887,
AND MAY 4TH, 1888, RESPECTIVELY.

BY

C. B. KEETLEY, F.R.C.S.,

SENIOR SURGEON TO THE WEST LONDON HOSPITAL, AND SURGEON TO
ITS ORTHOPÆDIC DEPARTMENT.

(Republished from the 'Lancet' and from the 'Medical Press and Circular'.)



LONDON:

BAILLIÈRE, TINDALL, AND COX,
20, KING WILLIAM STREET, STRAND.

[188]

14 197-2228

M18228

WELLCOME INSTITUTE Library	
Coll.	wellcome
Call	
No.	WE 850
	1888
	K 260

A3

I.

ADDRESS ON THE SURGERY OF THE
KNEE-JOINT.

*Delivered before the West London Medico-Chirurgical Society,
Oct. 7th, 1887.*

GENTLEMEN,—I propose to contrast the treatment of the principal affections of the knee-joint and its immediate neighbourhood as practised at the present day with that in favour with the leading surgeons ten years ago.

The knee is a region pre-eminently fitted to be chosen for such a contrast. It is so superficial that the alterations produced in it by disease are manifest and clearly marked. It is so liable to disease and so exposed to accident that the most youthful and inexperienced surgeon is familiar with it. Its affections are also types of all surgery; not only are chronic pulpy disease of the synovial membrane of the knee and central necrosis of the head of the tibia types of similar affections which attack the other great synovial membranes and epiphyses of the body, but even genu valgum, properly understood, is a key to the comprehension of scoliosis, of flat foot, and of other leading deformities, of which a false pathology, a false etiology, and a misguided treatment are even

to this day too frequently taught and practised. Let anyone study carefully the facts and opinions on chronic disease of the knee-joint to be found in the handbooks and monographs of ten years ago, and he cannot fail to see that in those days, recent as they are, the rich man with chronic knee-joint disease who submitted to an operation was little better than a fool, while the poor man who was operated on in order to get independence and the means of earning a living for himself and his family was a hero. In short, ten or twelve years ago, it was the practice, and then the correct practice founded on the experience of the time, to tell a patient with a diseased knee, if he was no longer quite young, that his choice lay between, on the one hand, immediate amputation of the thigh, and, on the other, a long, tedious process of treatment, very likely involving three, five, or even ten years' incapacity for following his employment, and, as likely as not, ending in amputation after all. He had also to be told that his chances of life and death after amputation were no better than two to one.* If the patient were a child or an adolescent, not very different information could be honestly given. Amputation at that age was comparatively safe, but excision was still very dangerous. Of ninety-seven cases collected by Bryant, twenty-seven died.

Scarcely less serious were the long periods required for treatment after excision. 'Roughly speaking, the

* Bryant's statistics of 119 amputations in patients between the ages of twenty and forty. See Erichsen, vol. ii., p. 272 (date 1877).

average duration of treatment (after excision) was about eight months,' wrote Holmes ; but this is short compared to the period during which the poor patients, almost all belonging to the lower orders, probably required treatment, but did not get it, from sheer weariness on the part of the doctor or the patient, or the parents of the latter, or from the pressure of house-committees.

Now let us turn to the present time. In the first place, it is now, practically speaking, quite safe for a surgeon experienced in such operations to open wide the knee-joint and explore its every crevice ; moreover, within two or three months he can expect to see every part of the joint and every muscle acting on it completely restored again. The history of the operation for suture of the patella proves this. It is true that some unfortunate results have occurred and a few fatal ones ; but when we remember what a large number of sutures of the patella have been done by surgeons with little or no practical experience of such operations, and many of them quite recent converts to a faith in antiseptic surgery, after being trained to habits absolutely inconsistent with it, and, like all habits, difficult to shake off—when we bear these facts in mind, we should be surprised, not at the occasional failure of the operation, but at its frequent success. But this is not a mere question of numbers. Look at the *quality* of the success in most cases of antiseptic suture of the patella, the rapid convalescence, the perfect restoration of function, and the absence of every sign of danger from first to last.

In the matter of operations, a surgeon can speak,

after all, only for himself, and for those with whose practice he is personally familiar: it is, therefore, merely a cautious and guarded mode of speaking, and not vain boasting, when I say that I feel less fear now about opening and examining a knee-joint than I felt ten years ago about excising a fatty tumour. Not that I can count excisions of the knee by the dozen, but because for some years I have been week by week acting on the faith I have just declared, and have found in every bone and every joint, and nearly every cavity of the body, my confidence justified. But I never myself commenced to practise in any department of operative surgery without feeling the disadvantages of inexperience, and being, moreover, shown by the course of events what dangers are run by the patient on whom the surgeon tries his 'prentice hand. For instance, my first case of osteotomy suppurated and did no good. In only two instances since has a single drop of pus formed, and in these two the ultimate result was excellent and not long delayed. In fact, let us never forget to distinguish between the dangers of an operation and of the particular operator who does it.

It is no longer necessary for the honest surgeon to tell his patient with diseased knee that to submit to operation is to run a risk as great as that of fighting in a forlorn hope. On the contrary, given a patient free from consumption, not hopelessly exhausted and broken down, and not over forty years of age, I can honestly tell him that I can open his knee-joint and either remove the diseased parts, or excise the joint, or amputate, according to what may be required in

his individual case, with no fear of serious risk to life. And the prognosis as regards the quality of the limb, if saved by operation, is also extraordinarily improved.

What was the ordinary result of a successful operation ten years ago? A limb greatly shortened, the foot sometimes nearly on a level with the lower part of the opposite calf, the knee often greatly bowed outwards and bent forwards, almost always absolutely stiff, and if movable, weak and unreliable. Now, as to shortening, I will, if all be well, exhibit in the course of the session a series of cases, each a type of a different mode of operating suitable for cases like itself. In only one will you detect marked shortening, and that scarcely enough to be either a disfigurement or an inconvenience. In one of these cases there is excellent mobility, and no weakness therewith. How long were they in hospital after operation? An average of two or three months each. Has any sinus or sign of disease remained? No.

It remains now to indicate how these improved results can be attained. In the first place, it is now recognised that the diseased soft parts, the degenerated synovial membrane, and the infected bursæ require removal as much as do the carious portions of bone. Not a hint of this was to be read, at all events in English works, a dozen years ago. Secondly, healthy bone is, as a rule, left alone. The practice of removing sound bone or cartilage, because they *might* become diseased if left, should now be scouted as ridiculous, if not monstrous. Whatever healthy bone is taken away is removed for mechanical reasons:—

e.g., to prepare two surfaces suitable for cohesion when speedy osseous ankylosis is expressly desired, or to give access to concealed parts, or to make a channel for drainage. Thirdly, when disease has spread to the shaft of the bone, the medulla is scraped out, and the surgeon does not go on either slicing away one inch after another of the shaft, or else proceeding to amputation instead of excision.* Fourthly, the effect of certain drugs on the diseased parts is known and utilized. Fifthly, the joint is opened in such a way and closed, after operation, by such means as completely restore the joint capsule and the muscles and aponeuroses around it. Sixthly, a better system of drainage has been introduced. Seventhly, dressing and after-treatment have been greatly improved. Eighthly, after excision the bones are wired. The diseased soft parts, the pulpy synovial membrane, and so much of the ligaments and bursæ as may be diseased, are carefully cut away with scissors. In many cases these are the very centre and focus of the disease, such bone and cartilage as may suffer being attacked quite secondarily, and sometimes to an insignificant extent—as, for instance, was the case with the young woman whom I will show you, who recovered rapidly and with a very movable joint. This excision of soft parts has to be done with great care and thoroughness; but it is not necessary to remove absolutely every vestige of disease in order to effect a cure. In this respect tuberculosis of the joints differs markedly from cancer. As a matter of fact, tuberculosis tends to die a natural death. Time will kill local tuber-

* See 'Annals of Surgery,' 1885, vol. i., p. 1.

culosis unassisted by the surgeon. The misfortune is that it is so dilatory in the exercise of its healing powers that very often the patient or his joint, or both, are destroyed before the disease, but when vigorously helped by the surgeon, time wakes up as it were. It has been often observed, after excision of a joint, that tuberculous granulations have sprung out, say, from a sinus left by a drainage tube, lived a precarious existence, and then perished spontaneously, or with very little interference from the surgeon. Nevertheless, it is well to operate with the greatest possible care and thoroughness.

Next, with regard to the treatment of healthy bone, it used to be the rule to take away the patella lest it might become diseased. Some surgeons—*e.g.*, P. H. Watson of Edinburgh—opposed the practice, but they were exceptions. Now, when once the tuberculous foci have been found and thoroughly removed, not an atom of bone should be cut away except to favour drainage, or to make opposed surfaces fit after excision. After a really complete and systematic operation on a tuberculous knee-joint the fear of recurrence is small. And if we are to attempt to abolish it by removing all cancellous bone in which the return can possibly take place, amputation may as well be done at once. In fact, those surgeons who, with these views, always amputate and never excise are strictly logical. In children, more bone and articular cartilage have usually to go than in adults. I have several times completely, or almost completely, scraped out the bony part of the epiphyses, always carefully leaving the so-called epiphysial cartilage,

and removing no more of the articular cartilage than was either necessary to give entrance to the sharp spoon, or was itself diseased. The cartilage on those parts of the femoral condyles which actually touch the opposed articular surface should be, as far as possible, left untouched. Any small diseased points in it may be carefully picked out. If both articular and semilunar cartilages are healthy, the latter may be left.

Now with regard to drugs. Those best adapted for the purpose are solutions of sublimate (1 in 1,000), and iodoform in crystals. That the latter has a really specific influence on the tuberculous *materies morbi* (it is quite unnecessary to enter into the question of whether it is or is not Koch's bacillus) can scarcely be doubted. Always should iodoform crystals be dusted over the surface operated on, and especially in the crevices and recesses of the joint, where there is most danger of portions of infected tissue having been left behind. To place the iodoform in these, the cutting spoon may itself be used, in its capacity as a spoon, not as a cutting instrument. The iodoform should be placed before the Esmarch's bandage is removed and while the joint is dry. Free sponging and douching with the sublimate solution should precede the iodoforming. It is dangerous, expensive, and not necessary to use iodoform extravagantly, and the crystals, as being less quickly and easily absorbed, are safer than the ground powder. An ethereal solution of iodoform may be used. It will penetrate into every crevice and deposit a thin layer of the drug on every surface. But it is irritating to

the eyes of the surgeon and his assistants, especially if it has been long kept.

The manner of opening the joint is very important. For a thorough exploration of the knee-joint a transverse incision is essential, and it must be supplemented by a perpendicular incision to open the synovial pouch, which extends upwards beneath the extensor cruris. The transverse incision may divide either the patella itself or the ligamentum patellæ; preferably the former, I think. A strong knife will cut a child's patella, but an adolescent or adult requires a saw. I prefer to divide the patella because (1) it can be so easily, certainly, and perfectly reunited; and (2, a minor and almost superfluous argument) the section shows accurately the condition of the centre of the bone. I doubt whether a sutured ligament is as strong and trustworthy as a sutured bone. Therefore one should, if possible, avoid dividing the lateral ligaments. When divided they should be carefully sutured at the conclusion of the operation. A short supplementary incision may be made anywhere, if required to expose any otherwise inaccessible angle or crevice. In the West London Hospital, some years ago,* I introduced a new mode of opening the joint, applicable when it is not infected with tubercular disease—*e.g.*, when excision is to be done for injury or for orthopædic purposes, and particularly applicable as an exploratory incision in cases of injury to the knee-joint. It consists in a long perpendicular incision through the patella, ligamentum patellæ, and anterior wall of the upper synovial pouch. Ollier of Lyons

* September 11th, 1883.

had described and recommended this incision a few months before I did it ; but, to the best of my belief, mine was the first case, and I was led to operate thus, certainly not by Ollier's paper, of which I had not then heard, but by the simple intention of obeying one of the first rules of the surgery of the limbs, which is always to prefer a longitudinal incision where it will suffice. The same operation has been recently and independently devised by Mr. Herbert Allingham. I would not, however, employ it for tuberculous disease ; it does not, in my opinion, give sufficient view and access for operating thoroughly and minutely.

On the table is a specimen of a knee-joint which I explored in this manner. The condyles were merely bruised. There was a compound fracture just above but not into the joint, as the exploration showed. I drained it for a few days, and if the whole limb had done as well as the joint the specimen would not be here. But the lacerated tendons and skin sloughed so extensively throughout the popliteal space and calf that there was no hope of getting a useful leg, and grave risk of inability to keep aseptic the compound fracture. I therefore amputated the thigh, and the boy did well.

When a patella has been cut in two with a knife or saw, more care is required to fit the segments accurately together than after a fracture. In the latter case they interlock like the pieces of a puzzle. In the former they readily glide, tip, or gape. Catgut does very well for the suture, and in children it can be carried through the cartilaginous patella with a strong needle. When there is prospect of a movable

joint, cut aponeuroses should be united with buried catgut sutures. Cut ligaments should always be so treated. The crucial ligaments should be spared if possible, and they can be spared in most of the cases fitted for simple erasion.

Now as to drainage. Special tubes should be inserted into the superior synovial pouch. Generally the centre of the joint is best drained towards the side, the tube lying in a channel gouged for it in the surface of one or other condyle. A special lateral or postero-lateral opening may be made for it. This main tube should be large, especially if the joint has suppurated before operation. Indeed, in that case the tubes should all be large and permeate every part of the joint and everywhere the abscess may have burrowed. Secondly, one should not be in a hurry to remove these tubes. A fortnight for a case which is aseptic is not too much. And when a case is septic the tubes should be kept in until the knee is either ankylosed or amputated if it cannot be saved. Endless mischief is done by the eagerness of inexperienced people to withdraw drainage tubes.

With the use of sublimated wood-wool or turf-moss pads, and firm bandaging and strapping, aseptic cases will heal under one dressing, but a pedantic desire to obtain this is to be deprecated. If pain or a rise of temperature occur, and cannot be plainly referred to some obvious or removable cause, it is best to dress at once. Recurrent and secondary hæmorrhage used to be particularly frequent after excision of the knee. I always bandage the turf-moss or wood-wool pads

very firmly down at the first dressing, and the next day relax any uncomfortable pressure by snipping with the scissors, afterwards stretching strips of strapping across any gaping interval. Sometimes, especially in children, I do not tie a single artery, but apply the dressings before having the Esmarch's band removed. Since I have used thick sublimated pads of turf-moss or wood-wool I have never been troubled with hæmorrhage. They should be bandaged on very firmly and evenly, and the limb kept much elevated for the first twenty-four hours. Some surgeons do not use Esmarch's bandage for fear of troublesome recurrent hæmorrhage after it. No such fear need be felt when the value of such a mode of dressing and elevating as that just described is properly appreciated. I have seen great and even dangerous shock after excision of the knee without the use of the bandage. The more I see of operative surgery, the more am I convinced that so-called shock is generally due almost entirely to loss of blood, or, at all events, that most of what is serious and dangerous in shock is due to hæmorrhage. Another cause of shock is a long operation and its necessary accompaniment, prolongation of the anæsthesia. With a bloodless limb, one can operate faster, and, at the same time, better.

One of the greatest essentials of after-treatment is perfect, continuous, undisturbed fixation. Nothing secures this so well as plaster-of-Paris. But its universal use is very wasteful of the surgeon's time, which is no more an inexhaustible quantity in a civil hospital than on the field of battle. I have therefore sometimes put up fresh excisions with movable splints

for the first fortnight, by which time the wound is usually almost healed and the discharge has ceased, so that a small, thin, antiseptic dressing suffices. Over this a plaster-of-Paris case fits much better and more effectively than over a large turf-moss or wood-wool pad. During the first fortnight a weight extension may be found comfortable and satisfactory after erosion. It would be out of place in excision cases on account of the wires with which the bones should always be fixed together. Many surgeons prefer nails or screws to wires. I do not think anything can be simpler or handier or more effective than wires. Two are required, one on each side. They can be either buried permanently or arranged for removal. In the latter case they should be left for two months. Perfect osseous ankylosis must not be reckoned on under several months after any form of operation, not even when plaster-of-Paris is used continuously.

If it is asked to whom all the alterations—improvements, I hope—above noticed are due, it becomes difficult to do justice to the West London Hospital and to others at the same time. Primarily they are the logical outcome of a belief in antiseptic surgery and of the application of a variety of means due to different inventors, not the least important being Esmarch's bandage and the sublimated pads brought here from Germany. With regard to operative measures, incisions, modes of drainage, sutures, etc., I can honestly say that most of those I use I have worked out for myself, but I must add (1) that many are the same, or nearly the same, as have been lately described by French, German, and American surgeons; and (2)

that I did not divide the patella transversely until I had seen a case of Mr. Golding-Bird's. He, I believe, had been anticipated by Volkmann, who got the start of all of us English surgeons in these matters, and who is, moreover, a genius. To Mosetig-Moorhof of Vienna, more than to anyone else, we owe the anti-tuberculous use of iodoform. I was using pure carbolic acid for the purpose when I heard of Mosetig-Moorhof's observations, and I had good results with it; but iodoform has obvious and great advantages over a drug so caustic. I used to entirely cover the dressing with elastic bandage before the turf-moss pads came over. While house-surgeon in Birmingham, I learnt from Gamgee the value of pressure. Some British surgeons have also been working successfully with erasion, especially Wright of Manchester. If I needed anything to confirm my faith in the methods I have described, enough could be found in a recent paper by Professor Ollier of Lyons, the first authority in France on this subject, and second to none in Europe. The procedures he recommends are very similar to those in use at the West London.

Such, gentlemen, is a brief outline of what can be done, and what I believe ought to be done, in cases of chronic knee-joint disease fitted for operative treatment. It is but an outline. Each division of the subject would suffice for a complete paper, but I think you would now be more wearied than you are, had my address been devoted wholly to some single question, such as how to drain the knee after excision, or how to dress it after erasion. I would have liked

to have described Annandale's operation for subluxation of the knee—which I have tried. It consists in suturing the too movable semilunar cartilage to the superjacent fascia lata and aponeurosis. Concerning simple drainage of the knee there is much to be said. Of suture of the fractured patella you must have heard and read *ad nauseam*. Amputation through the knee-joint is a subject of great interest, of which our fellow-member, Mr. Pick, has had exceptional experience. I will only say that I prefer Gritti's method to any other. Then there are many diseases commonly called of the knee, but really affecting neighbouring structures—*e.g.*, genu valgum, genu varum, and also contractures and paralyses. And what a valuable addition to the surgeon's means is MacEwen's osteotomy for genu valgum!

But time, which can bring even tuberculous processes to an end, must stop even this long and, I fear, wearisome address. I would like, in concluding, to ask you not to imagine, because I have spoken almost entirely of operations, that I recognise no other surgery of the knee-joint. Sea-air, rest, plaster-of-Paris, and more than one variety of splint are invaluable means which no reasonable person should underrate. But to-night I thought I could interest you more by talking about other things; that is all. It would ill become me to sit down without referring to my predecessors in this chair—to those who, not less than your election, have made it an honour to preside here. We are a semi-suburban society—the most successful and important suburban scientific society in the world, I would venture to boast; and in what

respect have we been more successful than in our past presidents? I have neither the learning nor classical culture of Dr. Vinen, nor the wide knowledge of Dr. Thudichum combined with originality. Nor can I claim the natural dignity and charm of manner of Mr. Hemming, or the perfect common sense and experience of Mr. Lawrence. But I hope and believe that I do share with Dr. Alderson in feeling a most intense desire for the success of this society, and appreciation of the honour you have done me. Such feelings have been the guiding-star of my immediate predecessor. They have shone out as plainly and brightly as any lighthouse-lamp or beacon-fire, visible not only to our late captain himself, but to every one of his crew. And now the helm is handed over to me, I have but to remember the past year in order to carry in mind a chart for the future.

II.

THE RESPONSIBILITY PLACED ON THE PHYSICIAN AND GENERAL PRAC- TITIONER BY THE MODERN PROGRESS OF SURGERY.

*Retiring Presidential Address, delivered before the West London
Medico-Chirurgical Society, May, 1888.*

GENTLEMEN,—The eloquent Cavendish Lecture recently delivered before our Society by Sir William Stokes, dealt with the altered relations of medicine and surgery to each other, and called attention more especially to the marvellous increase which has occurred in our times of the power of surgery to cure internal diseases and deeply-seated injuries.

I would like to recur to the same subject, only less broadly, confining these remarks to certain points. If the fullest and most successful use is to be made of the increased power of surgery, it is absolutely necessary that there shall be cultivated to the utmost the systematic co-operation of the physician with the surgeon. In the term 'physician' is included the general practitioner, who cannot be more accurately described by any name than that of 'family physician.' A second necessity is that there should

spread widely throughout the whole profession a good working knowledge of the earliest symptoms of such affections as intestinal obstruction, perforation of the appendix vermiformis, or of other parts of the digestive tract, rupture of the stomach, or of the bladder, or of the kidney, renal calculus, peritonitis, perityphlitis, the various affections of the female generative organs, amenable to surgical treatment, and, passing to another part of the person, intra-cranial abscess and hæmorrhage and tumour. This anything but exhaustive list is given by way of example. Now, how many men are there in this room, how many are there in this city, how many in Great Britain, who have as good a practical knowledge of the diagnosis of, say, not only intra-cranial abscess, but even of renal calculus and acute intussusception as they have of typhoid fever and of pneumonia? Let our own consciences reply. And yet these things which are so obscure to many of us are not so exceedingly rare; they are also terribly fatal, but wonderfully remediable by correct surgery *promptly applied*, while such diseases as pneumonia and typhoid often require no active treatment whatever. At all events, in dealing with the latter, a policy of waiting until the diagnosis is clear may do no harm.

But in the case of almost all the acute, and some of the subacute, internal diseases now brought into the province of surgery, to wait is to be lost. I would like to go into detail and tell of case after case in which the surgeon was appealed to by the practitioner, or even by the consulting physician, only when the shadow of approaching death had already crept over

the patient. But as each case would be recognisable by those who had to do with it, there would be danger of appearing to reproach individuals, and to reproach at all is the last end I have in view. I know too well, and feel too strongly, how intensely difficult is the path we have to tread, how inaccessible the ideal goal at which we should aim. Nevertheless, let us set up this ideal, and with kindness and earnestness encourage each other to struggle onward towards it.

A first word of encouragement with regard to cases of intestinal obstruction is this : It is almost always, when once the abdominal cavity is opened, easy to speedily discover the exact nature, locality, and anatomical extent of the trouble. Such manœuvres as passing yards of small intestine, inch by inch, through the fingers are things to read about in books and avoid in practice. Often an intussusception can be felt at once ; many have been discovered through the abdominal wall or per rectum before the operation. The first coil of intestine that appears in the wound, frequently, by its inflamed appearance, growing fainter in one direction, and more intense in another, guides straight to the constricting band or other source of mischief.

Secondly, the seat of disease or injury once found, it can usually be easily reached and dealt with in whatever part of the abdomen it may be. For instance, although the promontory of the sacrum and the right sacro-iliac synchondrosis cannot be dragged out of the abdominal incision, the latter can be pressed backwards towards them. Let no one, there-

fore, be deterred from counselling operation for intestinal obstruction by the idea that the seat of disease will be either difficult to find or to get at.

Thirdly, an abdominal exploration, properly conducted, in a case not too far gone, can be made with almost absolutely no danger. Here is a typical example : Some years ago a man was admitted into W. L. H. ward of the West London Hospital with symptoms, recent and not severe, of strangulated or obstructed hernia. It was thought that the contents of the sac might be hooked back easily from within the abdomen. Two fingers were inserted through a small opening in the linea alba and the attempt made. As much force was used as was reasonable, but in vain. Then a regular ordinary herniotomy was done, and omentum found adherent to the fundus of the sac, which accounted for the irreducibility *à tergo*. The sac and omentum were excised. Recovery was as quick and uncomplicated as could be. The median abdominal incision produced no ill-effects whatever. Now let us suppose that the same man had had similar symptoms, but no hernia. He would have been a type of those cases in which there are suspicious but not conclusive signs of intestinal obstruction. Better that twenty such barren explorations should be made than that physician or surgeon should sit down and watch one genuine case of intestinal obstruction steadily and surely perish. But even in the practice of the most inveterate discoverer of mares' nests, no such proportion of barren explorations to successful operations would occur. There would more likely be twenty of the latter to one

of the former. For, really, the serious cases are generally plain enough, even after a few hours. The acute pain, the gushing vomit, the collapse, the constipation which mark acute obstruction, do not form a collection of symptoms which are every day seen to clear themselves up. And there is usually a significant history to help to the diagnosis of a case of chronic obstruction.

With regard to acute obstruction, the case is well put by Mr. Greig-Smith in his most interesting and valuable work on abdominal surgery. 'At once, or within a few hours, we ought to make a definite diagnosis. If we are convinced that it is acute obstruction, then operation should be performed at once; if we are convinced that it is not, another treatment equally definite ought to be pursued. From the beginning a definite plan of treatment ought to be laid down, and this plan ought to be adhered to. Let it be either drugs or operation, and never that fatal compromise—operation when drugs fail.'

In the surgery of the brain, to which Sir William Stokes particularly called our attention by his narration of his own instructive cases, quick diagnosis is not of so great importance as correctness, especially in the matter of localization. But it is possible to throw very valuable time away, and especially in the treatment or neglect of surgical treatment of some of the ear diseases which lead to so large a proportion of the cerebral abscesses which occur. And correct localization is often greatly assisted by careful observations of where such symptoms as paralysis and spasms *begin*. The earliest of these symptoms are

the most valuable. When the progress of the case has made paralysis more or less general then the symptoms no longer point to a particular centre.*

In general surgery it is equally important, if full advantage is to be taken of the improvements made by Lister and others, to act in time. Volkmann introduced the practice of classifying amputations, for statistical purposes, into 'complicated' and 'uncomplicated,' the former being such as those in which pyæmia previously existed. In the class of cases termed 'uncomplicated' the improvement in results which has followed the introduction of Listerism is well known to be wonderful. Not so with regard to 'complicated' or pyæmic cases. These do very little better now than formerly.† It is, even in 1888, still useless to lock the stable-door when the horse is stolen. In short, gentlemen, antiseptic surgery can do marvels, but not miracles. In order that it may do successfully its mighty share in the salvation of human life, and the alleviation of human misery, it requires primarily and essentially an extensive and sound knowledge of symptoms and power of diagnosis on the part of the great body of the profession.

* A patient with suspected lesion of the brain or its membranes should be attentively and frequently watched, as the first symptoms of cerebral irritation, *e.g.*, convulsions, give the most valuable indication of the localization of the injury; also the temperature should be taken frequently, as an ominous rise may be sudden and rapid. Dr. Robertson of Glasgow thinks an intelligent observer should be in constant attendance on such cases.

† For instance, Billroth's statistics show a gradual decline of the death-rate after major amputations in non-complicated cases from 35·1 per cent. to 5·7 per cent. ; but of 'complicated' cases he still lost 10 out of 17.

This task of early diagnosis may be, in fact is, difficult, but it is honourable exactly in proportion to its difficulty. The acute, well-read, observant, and thoughtful man who diagnoses and localizes a cerebral abscess, whether he be consulting physician or country practitioner's apprentice, deserves more credit than the surgeon who, proceeding by rule of thumb, just as he would if carving a turkey, lets out the pus. The general standard of medical attainments is not now what it was, and the time is gone by when the highest ambition of practitioners was thought to be duly satisfied when, in the history of a case, they were merely named as having sent it to the consultant.

THE END.



ALPHABETICAL INDEX OF AUTHORS.

	PAGE
ABERCROMBIE (J.) On Tetany in Young Children	13
ADAMS (W.) Deformities (in Gant's Surgery)	27
ALLAN (J. H.) Materia Medica Tables	20
ALLEN (Alfred) Microscopical Science	22
BAKER (Benson) How to Feed an Infant	23
BANHAM—Veterinary Tables.....	33
BARRAUD (H. R.) Picture of the International Medical Congress	19
BEACOCK (J.) Prize Essay on Breeding Cattle, etc.	33
BELL (J.) Manual of Surgical Operations	28
BERNARD (Claude) and HUETTE'S Text-book of Operative Surgery	27
BIGELOW (Horatio R.) Hydrophobia as it appears in Man	18
BLACK (C.) Atlas of the Male Organs of Generation	8
BLACKLEY (C. H.) Hay Fever, its Causes and Treatment	18
BLAKE (Carter) Translation of Fau's Anatomy for Artists	9
BODDY (E. M.) History of Salt.....	26
BOYD (Stanley) Movable Atlas of the Foot, its Bones and Muscles	8
BROCHARD (J.) Practical Guide for the Young Mother.. ..	23
BROWN (A. M.) Treatise on Animal Alkaloids	9
BROWN (George) The Student's Case-book	11
——— Aids to Anatomy	7, 31
——— Aids to Surgery	27, 32
BROWNE (Balfour) Mental Responsibility and Disease	11
BROWNE (Lennox) The Throat and its Diseases	29
——— Forms for taking Throat and Aural Cases	12
——— Movable Atlases of the Throat and Ear	8
BROWNE (W. J.) The Moon, its Influence on Weather	22
BURNES (A. G.) The Specific Action of Drugs.....	34
BURTON (J. E.) Translation of Ebstein's Gout	18
CAMERON (Chas.) Microbes in Fermentation, Putrefaction, and Disease ...	22
——— The Cholera Microbe and How to Meet It	13
——— A Romance of War	30
CAMPBELL (C. M.) and HARRIES (A.) Lupus, a Clinical Study	26
CANTLIE (Jas.) Atlas of the Hand	8
——— Text-book of Naked-Eye Anatomy	7
CARTER (R. Brudenell) Training of the Mind.....	22
CASSELLS (J. Patterson) Translation of Politzer's Diseases of the Ear	15
——— Deaf-mutism and the Education of the Deaf-mute	14
CHARCOT (J. M.) Bright's Disease of the Kidneys.....	20
CLARKE (E. H.) The Building of a Brain	11
COCKLE (John) Contributions to Cardiac Pathology	18
——— Insufficiency of the Aortic Valves.....	18
COFFIN (R. J. Maitland) Obstetrics	23
COLE (A. C.) Studies in Microscopical Science	22
COOPER (R. T.) On Vascular Deafness	15
COTTERELL (Ed.) The Anatomist's Vade Mecum	9
COURTENAY (E.) Practice of Veterinary Medicine	34
CULLIMORE (D. H.) Consumption as a Contagious Disease	14
CUTTER (George R.) Dictionary of German Terms used in Medicine.....	15

	PAGE
DARLING (W.) Anatomography, or Graphic Anatomy	9
——— The Essentials of Anatomy	7
DARTNELL (G. M.) Notes on Anatomy	7
DAWSON (W. E.) Guide to the Examinations of the Apothecaries' Society	15
DAY (W. H.) Irritable Brain in Children	11
DENNIS (Hy. J.) Second-Grade Perspective Drawing.....	10
——— Third-Grade Perspective Drawing	10
DOLAN (T. M.) Whooping Cough, its Pathology and Treatment.....	30
——— Summary of New Remedies	23
DOWSE (T. Stretch) Ataxia	10
——— Apoplexy	9
——— Syphilis of the Brain and Spinal Cord.....	11
——— Skin Diseases from Nervous Affections	26
——— The Brain and the Nerves	11
——— Movable Atlas of the Brain and Skull	8
DRAGENDORFF (Prof. G.) Plant Analysis	26
DRYSDALE (C. R.) Nature and Treatment of Syphilis	27
DRYSDALE (John) The Protoplasmic Theory of Life.....	28
——— Germ Theories of Infectious Diseases	28
DUDGEON (R. E.) The Sphygmograph	26
EBSTEIN (Prof.) The Treatment of Gout.....	17
EDRIDGE-GREEN (F. W.) Memory	22
EDWARDS—Diseases of Children	13
EVANS (C. W. De Lacy) How to Prolong Life?	28
——— Consumption : its Causes, Treatment, etc.	14
FAU (J.) Artistic Anatomy of the Human Body	10
——— Anatomy of the External Forms of Man.....	9
FEARNLEY (W.) Text-book for the Examination of Horses.....	33
FITZGERALD (H. P.) Dictionary of British Plants and Flowers ..	10
FLAXMAN (J.) Elementary Anatomical Studies for Artists	9
FLEMING (G.) Text-book of Veterinary Obstetrics	34
——— Text-book of Veterinary Surgery	34
——— Actinomykosis	35
——— Laryngismus Paralyticus ..	35
——— Practical Horse-Shoeing	35
——— Animal Plagues, their History, Nature and Treatment	35
——— Contagious Diseases of Animals	34
——— Tuberculosis.....	35
——— Human and Animal Variolæ	35
——— Heredity and Contagion in the Propagation of Tuberculosis	35
FOTHERGILL (J. Milner) Chronic Bronchitis	11
——— Aids to Diagnosis (Semeiological) ...	14, 31
——— Aids to Rational Therapeutics.....	29, 33
——— The Physiological Factor in Diagnosis	14, 25
——— The Physiologist in the Household	25
——— Diseases of Sedentary and Advanced Life ..	23
——— Vaso-Renal Changes	19
——— What to Ask	14, 31
FUCHS (Dr.) The Causes and Prevention of Blindness	16
GANT (F. J.) Text-book of the Science and Practice of Surgery	27
——— Diseases of the Bladder, Prostate Gland, and Urethra	10, 29
——— Guide to the Examinations at the College of Surgeons.....	15
GIRAUD-TEULON—Anomalies of Vision	16

	PAGE
GLOVER (J. G.) Medical Reform	21
GORDON (Chas. A.) Our Trip to Burmah	11
——— Life on the Gold Coast	7
——— Lessons in Military Hygiene and Surgery	18
——— A Manual of Sanitation	19
——— Rabies and Hydrophobia	18
——— Reports of the Medical Officers of Chinese Service	13
——— Experiences of an Army Surgeon in India	19
GORDON (T. Hurd) Aids to Practical Chemistry	31
GORE (Albert A.) Our Services Under the Crown	22
——— Medical History of African Campaigns	7
GRAY—The Pocket Gray, or Anatomist's Vade-Mecum	9
GREEN (F. W. Edridge) Memory	22
GREENWOOD (J.) Laws Affecting Medical Men	21
GREENWOOD (Major) Aids to Zoology	30, 33
GRESSWELL (J. B. and A. G.) Manual of Equine Medicine	34
GREVILLE (H. Leicester) Student's Hand-book of Chemistry.....	13
GRIFFITHS (W. H.) Text-book of Materia Medica and Pharmacy	20
——— Posological Tables	25
GUBB (Alfred S.) Aids to Gynecology	18, 31
GUBB & GRIFFITHS. Materia Medica and Pharmacy	21
GUBLER (Professor) The Principles and Methods of Therapeutics	28
GUILLEMARD (F. H. H.) Endemic Hæmaturia	16
HALTON (R. J.) Short Lectures on Sanitary Subjects	19
HARRIS (Vincent) Manual for the Physiological Laboratory	25
HARRIES (A.) Scabies: its Causation and Treatment	26
——— and CAMPBELL (A.M.) Lupus: a Clinical Study	26
HARTMANN (Prof.) On Deaf-mutism, Translation by Dr. Cassells.....	14
HAYNES (Stanley) Healthy Homes	19
HEATLEY (G. S.) Practical Veterinary Remedies	35
HEIBERG (Jacob) Atlas of Cutaneous Nerve Supply	23
HEMMING (W. D.) Aids to Examinations	15, 31
——— Aids to Forensic Medicine	17, 31
——— Otorrhœa	15
HEPPEL—Analytical Conic Sections	17
HEWITT (Frederic) Anæsthetics	9
HILL (J. W.) Principles and Practice of Bovine Medicine	34
HIME (T. W.) Cholera: How to Prevent and Resist It... ..	13
——— The Practical Guide to the Public Health Acts.....	25
HOGG (Jabez) The Cure of Cataract	16
——— The Impairment of Vision from Shock	16
——— Parasitic or Germ Theory of Disease	28
HOPGOOD (T. F.) Notes on Surgical Treatment	27
HORNER (Professor) On Spectacles	16
HOWAT (G. R.) How to Prevent and Treat Consumption	14
HOWE (J. W.) The Breath, and Diseases which give it a Fœtid Odour	11
HUSBAND (H. Aubrey) Handbook of Forensic Medicine	17
——— Aids to the Analysis of Food and Drugs.....	16, 31
——— Handbook of the Practice of Medicine.....	22
——— Student's Pocket Prescriber	25
——— A Digest of the Sanitary Acts of England	27
HUTCHINSON (Jonathan) Guide to Diseases of the Eye.....	16
INCE (J.) Latin Grammar of Pharmacy	24
INTERNATIONAL MEDICAL CONGRESS.....	20
JACOB (A. H.) The General Medical Council	21

4 Baillière, Tindall, and Cox's Books.

	PAGE
JAMES (Brindley) Replies to Questions in Therapeutics.....	33
JAMES (M. P.) Laryngoscopy and Rhinoscopy in Throat Diseases	29
——— Therapeutics of the Respiratory Passages	29
——— Vichy and its Therapeutical Resources	30
JENNINGS (C. E.) On Transfusion of the Blood and Saline Fluids	29
JONES (H. Macnaughton) The Diseases of Women	18
JUKES-BROWNE (A. J.) Palæontology (in Penning's Field Geology)	17
KEETLEY (C. R. B.) Guide to the Medical Profession.....	21
——— Annals of Surgery	27
KENNEDY (Hy.) An Essay on Fatty Heart.....	18
LAFFAN (T.) The Medical Profession of the United Kingdom (Second Car-	
michael Prize Essay) ..	21
LAMBERT (J.) The Germ Theory of Disease	34
LEE (R. J.) Lectures on Diseases of Children ..	13
LE SUEUR Analytical Geometry, Straight Line and Circle	17
LETHEY (Hy.) The Sewage Question	26
LEASK (J. G.) Questions at Medical Science Examinations	16
LIAUTARD (A.) Animal Castration.....	34
LITTLE (Jas.) Clinical Note-Book	12
LEONARD (H.) The Vest-Pocket Anatomist	9
——— Bandaging	10
LOWNE (B. T.) Aids to Physiology	25, 32
LUNN (C.) The Philosophy of Voice	30
——— Artistic Voice in Speech and Song	30
MACKENZIE (M.) Diseases of the Throat (in Gant's Surgery)	30
McLACHLAN (John) Anatomy of Surgery	27
MADDICK (Distin) Stricture of the Urethra	26
MAGNÉ (Dr.) How to Preserve the Sight.....	16
MANIKIN (The) Medical and Physiological.....	<i>Wrapper</i>
MAPOTHER (E. D.) A Manual of Physiology	25
MARTIN (J. W. & J.) Ambulance Work	7
MASSE (J. N.) Text-book of Naked-Eye Anatomy.....	7
McBRIDE Anatomical Outlines of the Horse	34
MEARS (W. P.) Schematic Anatomy	9
MELDON (Austin) A Treatise on Gout	17
MEYRICK (J. J.) Stable Management in India.....	36
MILLARD (H. B.) Bright's Disease of the Kidneys.....	19
MILNE (Alex.) The Principles and Practice of Midwifery	22
MOLONY (M. J.) Rupture of the Perineum	26
MOORE (E. H.) Clinical Chart for Hospital and Private Practice.....	28
MORDHORST (Carl) Rheumatism. Its Treatment by Electric Massage ..	26
MORGAN (John) The Dangers of Chloroform and Safety of Ether	7
MORRIS (Malcolm) The Skin (in Gant's Surgery)	27
MUCKLEY (W. J.) Student's Manual of Artistic Anatomy.....	9
——— A Handbook for Painters and Art Students on the Use of Colours	13
MURRAY (R. Milne) Chemical Notes and Equations	12
——— Pregnancy	8
MUTER (J.) Key to Organic Materia Medica	20
——— Manual of Analytical Chemistry	13
——— Introduction to Pharmaceutical and Medical Chemistry	13
NALL (S.) Aids to Obstetrics	23, 32
NAPHEYS (G. H.) Modern Medical Therapeutics	28
——— Modern Surgical Therapeutics	28
——— Handbook of Popular Medicine	15

	PAGE
NATIONAL SOCIETY FOR PREVENTION OF BLINDNESS	16, 17
NORTON (A. T.) Text-book of Operative Surgery	27
——— Osteology for Students	24
——— Affections of the Throat and Larynx	29
——— Clinical Lectures on Hoarseness	31
——— Movable Atlas of the Skeleton	8
ORMSBY (L. H.) Deformities of the Human Body	14
——— Phimosis and Paraphimosis	24
——— Chart of Surgical Appliances	27
PALFREY (J.) Atlas of the Female Organs of Generation	8
PALMER (J. F.) How to Bring up Children by Hand	23
PARRISH (Ed.) A Treatise on Pharmacy	24
PENNING (W. H.) Text-book of Field Geology	17
——— Engineering Geology	17
——— Notes on Nuisances, Drains, and Dwellings	19
PETTENKOFER (Von) Cholera : How to Prevent and Resist it	13
POLITZER (Prof.) The Ear and its Diseases	15
POWER (Hy.) Movable Atlas of the Eye, and the Mechanism of Vision	8
——— Diseases of the Eye (in Gant's Surgery)	27
POWER (D'Arcy) Handbook for the Physiological Laboratory	25
POYSER (R.) Stable Management of Troop Horses in India	36
PRATT (W.) A Physician's Sermon to Young Men	22
PROCTOR (Richd.) The Stars and the Earth	10
PSYCHOLOGICAL ASSOCIATION'S Handbook for Attendants on the Insane.....	20
PURVES (L.) Aural Diseases (in Gant's Surgery)	27
RABAGLIATI (A.) The Classification and Nomenclature of Diseases	14
REMSEN (Ira) Principles of Theoretical Chemistry	12
REYNOLDS (R. S.) The Breeding and Management of Draught Horses.....	36
RICHARDS (J. M.) A Chronology of Medicine	22
RICHARDSON (B. W.) The Healthy Manufacture of Bread	17
RICHARDSON (Thos.) Chemistry in its Application to the Arts, etc.....	12
RIVINGTON (W.) The Medical Profession (First Carmichael Prize Essay)...	21
——— Medical Education and Organization	20
ROBERTSON (William) A Handbook of the Practice of Equine Medicine...	36
ROCHET (Chas.) The Prototype of Man, for Artists	10
ROTH (M.) Works on Deformities, Gymnastic Exercises, etc.	17
ROTH (W. E.) Elements of School Hygiene.....	19
——— Theatre Hygiene	19
ROUTH (C. H. F.) Overwork and Premature Mental Decay	24
——— On Fibrous Tumours of the Womb	23
——— On Checks to Population	25
SALISBURY (J. H.) The Salisbury Plans of Treating Disease	15
SARCEY (F.) Mind your Eyes.....	16
SCHOFIELD (A. T.) Examination Cards—Pathology.....	16, 24
——— Minor Surgery and Bandaging	16, 27
SEILER (C.) A Compendium of Microscopical Technology.....	22
SEMPLE (R. H.) Diphtheria, Its Causes and Treatment	14
——— Movable Atlas of the Human Body (Neck and Trunk)	8
SEMPLE (C. E. A.) Aids to Botany	11, 31
——— Aids to Chemistry	12, 31
——— Aids to Materia Medica	20, 32
——— Aids to Medicine.....	21, 32

6 Baillière, Tyndall, and Cox's Books.

	PAGE
SEMPLE (C. E. A.) Aids to Pharmacy	24, 32
——— Diseases of Children	13
——— The Voice Musically and Medically Considered	30
——— The Pocket Pharmacopœia	24
SEWILL (Hy.) Movable Atlas of the Teeth	8
——— Teeth. Dental Caries and the Prevention of Dental Caries	28
SHARMAN (J. S.) Notes on Inorganic Materia Medica	20
SIMON (W.) A Manual of Chemistry	12
SMITH (F.) Manual of Veterinary Hygiene	36
SPARKES (John C. L.) Artistic Anatomy	10
SQUIRE (P. W.) Posological Tables	26
STARTIN (J.) Lectures on Ringworm	26
STRANGEWAYS (Thos.) Text Book of Veterinary Anatomy	36
STUDENTS' AIDS SERIES	32
SUTTON (H. G.) Handbook of Medical Pathology.....	24
SWEETING (R. D. R.) The Sanitation of Public Institutions	19
SYMINGTON (J.) Anatomy of the Child	7
TEUTON (G.) The Functions of Vision	16
THIN (George) Introduction to Practical Histology	18
THOMSON (W.) Transactions of the Academy of Medicine in Ireland	29
THOROWGOOD (J. C.) Consumption ; its Treatment by the Hypophosphites	14
——— The Treatment of Bronchial Asthma	10
——— Aids to Physical Diagnosis.....	14, 31
THUDICHUM (I. L. W.) The Physiological Chemistry of the Brain	11
——— Aids to Physiological Chemistry	25, 32
——— Aids to Public Health.....	26, 32
——— Polypus in the Nose	25
——— The Coca of Peru, and its Remedial Principles.....	14
TICHBORNE (Professor) The Mineral Waters of Europe	23
TIMMS (G.) Consumption ; its Nature and Treatment	14
——— Alcohol in some Clinical Aspects, a Remedy, a Poison	7
TYSON (J.) The Urine, a Guide to its Practical Examination	29
UNDERWOOD (Arthur S.) Aids to Dental Surgery	28, 31
VAUGHAN (J.) Strangeways' Veterinary Anatomy	35
WAGSTAFFE (W. W.) Atlas of Cutaneous Nerve Supply	23
WALLER (B. R.) Interstitial Nephritis	23
WALLEY (Thos.) The Four Bovine Scourges	35
WILLIAMS (Maurice) Materia Medica	20
WILLIAMSON (J. M.) Ventnor and the Undercliff.....	30
WILLSON (A. Rivers) Chemical Notes for Pharmaceûtical Students	13
WILSON (J.) A Manual of Naval Hygiene	19
WINSLOW (L. S. Forbes) Handbook for Attendants on the Insane	20
——— Fasting and Feeding	16
——— Aids to Psychological Medicine	32
WITKOWSKI (G. J.) Movable Atlases of the Human Body	8, 17

AN
ALPHABETICAL INDEX OF WORKS,
IN
MEDICINE, SURGERY, SCIENCE AND ART,
PUBLISHED BY
BAILLIÈRE, TINDALL, & COX.

- Africa.** A Contribution to the Medical History of our West African Campaigns. By Surgeon-Major ALBERT A. GORE, M.D., Sanitary Officer on the Staff. Price 10s. 6d.
- Africa.** Life on the Gold Coast. A Description of the Inhabitants, their Modes and Habits of Life; Hints to Travellers and others in Western Africa. By Surgeon-General GORDON, M.D., C.B., Hon. Physician to the Queen. Price 2s. 6d.
- Alcohol**, in some Clinical Aspects: A Remedy, a Poison. By GODWIN TIMMS, M.D., M.R.C.P. Lond., Senior Physician to the North London Consumption Hospital. Price 1s.
- Ambulance Work.** Questions and Answers on "First Aid to the Injured." By JOHN W. MARTIN, M.D., and JOHN MARTIN, F.R.C.S. Eighth thousand. Price 1s., net.
- Anæsthetics.** The Dangers of Chloroform and the Safety and Efficiency of Ether in Surgical Operations. By JOHN MORGAN, M.D., F.R.C.S. Second thousand, price 2s.
- Anatomy.** Aids to Anatomy. By GEORGE BROWN, M.R.C.S., Gold Medallist, Charing Cross Hosp. Price 1s. 6d. cloth, 1s. sewn.
- Anatomy.** Text Book of Naked-Eye Anatomy. Containing 113 beautifully engraved Steel Plates, designed under the direction of Professor MASSE. Text by JAS. CANTLIE, M.B., C.M. (Honours), F.R.C.S., Charing Cross Hospital. Third Edition. Plain, 25s., hand coloured, 50s., bound half calf.
- Anatomy.** The Essentials of Anatomy. A Text-book for Students, and a book of easy reference to the Practitioner. By W. DARLING, M.D., F.R.C.S., and A. L. RANNEY, M.D. 12s. 6d.
- Anatomy. Notes on Anatomy.** By GEORGE MEADOWS DARTNELL, L.R.C.S. Part I.—Upper Extremity. Price 1s.
- Anatomy.** Anatomy of the Child. Illustrated with 14 coloured plates and 33 woodcuts. By JOHNSON SYMINGTON, M.D., F.R.S.E., F.R.C.S.E., Lecturer on Anatomy School of Medicine, Edinburgh. Price 42s.

Anatomy. Human Anatomy and Physiology, illustrated by a series of Movable Atlases of the Human Body, showing the relative positions of the several parts, by means of Superposed Coloured Plates, from the designs of Prof. G. J. WITKOWSKI, M.D. Each part complete in itself.

Part I.—Neck and Trunk. With Text Descriptive and Explanatory of the physiology and functions of the several parts. By ROBERT HUNTER SEMPLE, M.D., F.R.C.P., Lond. Price 7s. 6d.
The same enlarged to Life Size. Price £2 2s. 0d.

Part II.—Throat and Tongue, showing the Mechanism of Voice, Speech, and Taste. Text by LENNOX BROWNE, F.R.C.S. Edin. Price 7s. 6d.

Part III.—The Female Organs of Generation and Reproduction. Text by JAMES PALFREY, M.D., M.R.C.P. Lond., late Senior Obstetric Physician, London Hospital. Price 7s. 6d.

Part IV.—The Eye and the Apparatus of Vision. Text by HENRY POWER, F.R.C.S., Senior Ophthalmic Surgeon to St. Bartholomew's Hospital. Price 7s. 6d.

Part V.—The Ear and Teeth. The Mechanism of Hearing, and of Mastication. Text of the Ear by LENNOX BROWNE, F.R.C.S.E. The Teeth by H. SEWILL, M.R.C.S. Price 7s. 6d.

Part VI.—The Brain and Skull. (Cerebrum, Cerebellum, and Medulla Oblongata). Text by T. STRETCH DOWSE, M.D., F.R.C.P. Edin. Price 7s. 6d.

Part VII.—The Male Organs of Generation. Text by D. CAMPBELL BLACK, M.D., Physician to the Glasgow Royal Infirmary. Price 7s. 6d.

Part VIII.—The Skeleton and its Articulations, showing the Bones and Ligaments of the Human Body and Limbs. Text by A. T. NORTON, F.R.C.S. Price 7s. 6d.

Part IX.—The Hand; its Bones, Muscles and Attachments. Text by JAS. CANTLIE, M.B., F.R.C.S. Price 7s. 6d.

Part X.—The Foot; its Bones, Muscles and Attachments. Text by STANLEY BOYD, M.B., B.S., Lond., F.R.C.S., Assistant Surgeon, Charing Cross Hospital. Price 7s. 6d.

Part XI.—The Progress of Gestation: a Synopsis of Practical Obstetrics. Translated by R. Milne Murray, F.R.C.P. Edin., M.B. Edin. Price 7s. 6d.

* * No such simple, reliable, and comprehensive method of learning the several parts, positions, and functions of the body has hitherto been attempted; the entire Series being unique, will be most valuable to the Teacher, the Student, and to all who wish to become acquainted with the anatomy and physiology of the human economy.

- Anatomy. The Pocket Gray**, or Anatomist's Vade-Mecum. Compiled from the works of Gray, Ellis, Holden, and Leonard. By E. COTTERELL, L.R.C.P., M.R.C.S. Enlarged edition, 3s. 6d.
"A marvellous amount of information condensed into a remarkably small space."—*Med. Press.*
- Anatomy. The Vest-Pocket Anatomist.** By H. LEONARD, M.D. Price 1s.
- Anatomy. Schematic Anatomy**; or Diagrams, Tables and Notes treating of the Association and Systematic arrangement of Structural Details of Human Anatomy. By WILLIAM P. MEARS, M.B., Professor and Examiner in Anatomy at the University of Durham. Profusely illustrated. Price 7s. 6d.
- Anatomography**; or, Graphic Anatomy. A new method of grasping and committing to memory the most difficult points required of the student. By W. DARLING, M.D., F.R.C.S. Eng., Professor of Anatomy in the University of New York. Price 1s.
- Anæsthetics.** Selected Methods in the Administration of Nitrous Oxide and Ether. By FREDERIC HEWITT, M.A., M.D. Cantab. Lecturer on Anæsthetics at the London Hospital. Illustrated. Price 2s. 6d.
- Animal Alkaloids.** A Treatise on the Animal Alkaloids, Cadaveric and Vital; or the Ptomaines and Leucomaines, chemically, physiologically and pathologically considered, in relation to scientific medicine. By A. M. BROWN, M.D. Price 6s. net.
- Apoplexy.** Diagnosis and Treatment of Apoplexy. By T. STRETCH DOWSE, M.D., F.R.C.P.E., formerly Medical Superintendent, Central London Sick Asylum. Price 1s.
- Army Hygiene.** Lessons in Military Hygiene and Surgery. By Surgeon-General GORDON, M.D., C.B., Hon. Physician to H.M. the Queen. Illustrated. Price 10s. 6d.
- Artistic Anatomy.** Anatomy of the External Forms of Man, for the use of Artists, Sculptors, etc. By Dr. J. FAU. Used at the Government School of Art, South Kensington. Twenty-nine plates. Folio; New edition. 42s. coloured, 24s. plain.
- Artistic Anatomy.** Elementary Anatomical Studies of the Bones and Muscles, for Students and Schools, from the drawings of J. FLAXMAN, R.A. Lately used as a Text-book in the Art Schools at South Kensington. 20 plates, with Text, price 2s.
- Artistic Anatomy.** The Student's Manual of Artistic Anatomy. With 25 etched plates of the bones and surface muscles of the human figure. By W. J. MUCKLEY. Used at the Government School, South Kensington. Second edition. Price 5s. 6d.

- Artistic Anatomy.** Elementary Artistic Anatomy of the Human Body. From the French of Dr. FAU. With English Text. Used at the Government School of Art, South Kensington. Price 5s.
- Artistic Anatomy.** Description of the Bones and Muscles that influence the External Form of Man. With 43 plates. By John C. L. SPARKES, Principal of the National Art Training School, South Kensington. Adapted as a text-book at the Government Art Schools. Price 7s. 6d.
- Artistic Drawing.** Second Grade Perspective (Theory and Practice), containing 21 block illustrations, 20 plates, and many examination exercises. Used at the Government Science and Art Schools. By H. J. DENNIS, Art Master, Lambeth School of Art, Dulwich College, etc. Price 2s. 6d.
- Artistic Drawing.** Third Grade Perspective, for the use of Art Students. By H. J. DENNIS. Used at the Science and Art Schools. In two parts 7s. 6d. each. Part 1, Angular and Oblique Perspective. Part 2, Shadows and Reflections; or, half-bound leather in one vol., price 15s.
- Artistic Drawing.** The Prototype of Man, giving the natural laws of Human proportion in both sexes. A manual for artists and professors of drawing. By CHAS. ROCHET, of Paris. Price 1s.
- Artists' Colours.** Their Preparation, Uses, etc. (See Colours.)
- Asthma.** On Bronchial Asthma—its causes, Pathology and Treatment. Lettsomian Lectures. By J. C. THOROWGOOD, M.D., F.R.C.P. London, Senior Physician to the City of London Hospital, for Diseases of the Chest. Third edition. Price 3s.
- Astronomy.** The Stars and the Earth; or, Thoughts on Time Space, and Eternity. With Notes by R. A. PROCTOR, B.A., Fourteenth thousand, price 1s.
- Ataxia.** Nervous Affections associated with the Initial or Curative Stage of Locomotor Ataxy. By T. STRETCH DOWSE, M.D., F.R.C.P.E. Second edition, price 2s.
- Bandaging.** A Manual for Self-instruction. By C. H. LEONARD, M.A., M.D., Professor of Medical and Surgical Diseases of Women in the State College of Medicine, Michigan. With 139 illustrations. Price 3s. 6d.
- Bladder.** On Diseases of the Bladder, Prostate Gland, and Urethra. By F. J. GANT, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Fifth edition. Price 12s. 6d.
- Botany.** A Dictionary of British Plants and Flowers; their names, pronunciation, origin, etc. By H. P. FITZGERALD. Price 2s. 6d.

- Botany.** Aids to Botany. Outlines of the Elementary Facts, including a Description of some of the most important Natural Orders. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond. Price 2s. 6d. cloth; 2s. paper wrapper.
- Brain.** The Building of a Brain. By E. H. CLARKE, M.D. (author of "Sex in Education"). Price 5s.
 "Carefully and elegantly written, and full of sound physiology."—*Lancet*.
- Brain.** On Irritable Brain in Children. Paper read before the Medical Society of London, with Additions. By W. H. DAY, M.D., M.R.C.P. Lond., Physician to the Samaritan Hospital for Women and Children. Price 2s.
- Brain.** The Physiological and Chemical Constitution of the Brain, based throughout on original researches. By J. L. W. THUDICHUM, M.D., F.R.C.P., Lond. Price 10s. 6d.
- Brain.** Syphilis of the Brain and Spinal Cord, showing the part which this agent plays in the production of Paralysis, Epilepsy, Insanity, Headache, Neuralgia, Hysteria, and other Mental and Nervous Derangements. By T. STRETCH DOWSE, M.D., F.R.C.P. Ed. Second edition, illustrated. Price 7s. 6d.
- Brain.** The Brain and Nerve Exhaustion (Neurasthenia), by the same author. Price 2s. 6d.
- Breath.** The Breath, and the Diseases which give it a Fœtid Odour. By J. W. HOWE, M.D., Professor of Surgery in the University of New York. Price 4s. 6d.
- Bronchitis.** Chronic Bronchitis: its Forms and Treatment. By J. MILNER FOTHERGILL, M.D. Edin., M.R.C.P. Lond. Price 4s. 6d.
 "It bristles with valuable hints for treatment."—*British Medical Journal*.
 "The pages teem with suggestions of value."—*Philadelphia Medical Times*.
- Burmah.** Our Trip to Burmah, with Notes on the Ethnology, Geography, Botany, Habits and Customs of that Country, by Surgeon-General GORDON, C.B., M.D., Physician to the Queen. Illustrated with numerous Photographs, Maps, Coloured Plates, and Sketches in gold by native Artists. Price 21s.
 "We lay down this book, impressed with its many beauties, its amusing sketches and anecdotes, and its useful and instructive information of that comparatively unknown country."—*The Times*.
- Case-Books.** Students' Case-book. For recording cases as seen, with full instructions for methodising clinical study. By GEORGE BROWN, M.R.C.S., Gold Medallist, Charing Cross Hospital. Third thousand, cloth. Price 1s. net.

Case-Books. Forms for the taking of Aural Cases. By LENNOX BROWNE, F.R.C.S. Ed., Senior Surgeon to the Central London Throat and Ear Hospital. 25 in boards, price 2s.

Forms for the taking of Throat Cases. 25 in boards, price 2s.
Throat and Ear Cases. 50 in boards, combined, price 3s. 6d.

Case-Books. Note-book for the study of disease at the bedside. By JAS. LITTLE, M.D., Univ. Dub. Third ed., price 3s. 6d.

Chemistry. Aids to Chemistry. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond.

Part I.—Inorganic. The Non-metallic Elements. Price 2s. 6d., cloth; 2s. paper wrapper.

Part II.—Inorganic. The Metals. Price 2s. 6d., cloth; 2s. paper.

Part III.—Organic. Cloth, 2s. 6d.; paper, 2s.

Part IV.—Tablets of Chemical Analysis. Price 1s. 6d. and 1s.

"Students preparing for Matriculation at the London University, and other Examination will find it simply invaluable."—*Students' Journal*.

Chemistry. A Manual of Chemistry; a complete guide to Lectures and Laboratory work for beginners in Chemistry, and a text-book for students in Medicine and Pharmacy. By W. SIMON, Ph.D., M.D., Professor of Chemistry. Sixteen woodcuts, and coloured plates representing 56 Chemical reactions. Price 15s.

Chemistry. Chemistry in its Application to the Arts and Manufactures. A Text-book by RICHARDSON and WATTS.

Parts 1 and 2.—Fuel and its Applications. 433 engravings, and 4 plates. Price £1 16s.

Part 3.—Acids, Alkalies, Salts, Soap, Soda, Chlorine and its Bleaching Compounds, Iodine, Bromine, Alkalimetry, Glycerine, etc., their Manufacture and Applications, price £1 13s.

Part 4.—Phosphorus, Mineral Waters, Gunpowder, Guncotton, Fireworks, Aluminium, Stannates, Tungstates, Chromates and Silicates of Potash and Soda, price £1 1s.

Part 5.—Prussiate of Potash, Oxalic Acid, Tartaric Acid, tables, plates, and wood engravings, price £1 16s.

Practical Treatise on Acids, Alkalies, and Salts: their Manufacture and Application. In three vols., being Parts III., IV., V. of the above work, price £4 10s.

Chemistry. The Principles of Theoretical Chemistry, with special reference to the Constitution of Chemical Compounds. By IRA REMSEN, M.D., Ph.D., Professor of Chemistry in the John Hopkins University. Third Edition, enlarged. Price 7s. 6d.

- Chemistry.** The Student's Hand-book, with Tables and Chemical Calculations. By H. LEICESTER GREVILLE, F.I.C., F.C.S. Second Edition. Price 6s.
- Chemistry.** Chemical Notes for Pharmaceutical Students. By A. RIVERS WILLSON. Second edition, price 3s. 6d.
"Of exceeding value to students going up for examination."—*Pharmaceutical Journal*.
- Chemistry.** A Short Manual of Analytical Chemistry for Laboratory Use. By JOHN MUTER, Ph.D., M.A., F.C.S., President of the Society of Public Analysts. Third edition, price 6s. 6d.
- Chemistry.** An Introduction to Pharmaceutical and Medical Chemistry, Theoretical and Practical. With Analytical Tables and copious Index. By the same Author. Price 10s. 6d.
"The book is one of a very useful and original kind, and is brought up to the latest date, tests processes published only a few months since being fully described."—*Chemical News*.
- Children.** The Diseases of Children their History, Causes and Treatment. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond., Physician to the North-Eastern Hospital for Children. Price 6s.
- Children.** Lectures on the Diseases of Children delivered at the Hospital for Sick Children. By ROBERT J. LEE, M.D. Cantab., F.R.C.P., Lond. Second edition, enlarged. Price 3s. 6d.
- Children.** On Tetany in Young Children. By J. ABERCROMBIE, M.D., M.R.C.P. Lond. Price 2s.
- Children.** Modern Therapeutics of the Diseases of Children, with Observations on the Hygiene of Infancy. By T. F. EDWARDS, M.D. Price 12s. 6d.
- China.** Reports of the Medical Officers of the Chinese Imperial Maritime Customs Service, from 1871 to 1882, with the History of Medicine in China. Compiled by Surgeon-General GORDON, M.D., C.B., Physician to Her Majesty the Queen. Price 21s.
- Cholera:** How to Prevent and Resist it. By Professor VON PETTENKOFER. President of the Sanitary Department of the German Empire; and T. WHITESIDE HIME, A.B., M.B. Second edition. Illustrated. Price 3s. 6d.
- Cholera.** The Cholera Microbe and How to Meet It. Read at the Congress of the British Medical Association. By CHARLES CAMERON, M.D., LL.D., M.P. Price 1s.
- Coca.** The Coca of Peru, its Remedial Principles, and Healing powers. By J. L. W. THUDICHUM, M.D., F.R.C.P. Price 1s.
- Colours.** A Hand-book for Painters and Art Students, on the use of Colours, Vehicles, etc. By W. J. MUCKLEY. Price 3s. 6d.

Consumption. Consumption, as a Contagious Disease, with Treatment: including an Inquiry into the Relative Merits of the Air of Mountains and Plains. By D. H. CULLIMORE, M.K.Q.C.P., F.R.C.S.I., formerly Surgeon H.M. Indian Army. Price 5s.

Consumption. Consumption and its Treatment by the Hypophosphites. By JOHN C. THOROWGOOD, M.D., F.R.C.P. Lond., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park. Third edition, price 2s. 6d.

Consumption. A Re-investigation of its Causes, showing it to arise from an Excessive Action of Atmospheric Oxygen. By C. W. DE LACY EVANS, M.R.C.S. Eng. Price 2s. 6d.

Consumption. Tuberculosis from a Sanitary and Pathological Point of View. By G. FLEMING, C.B., F.R.C.V.S., President of the Royal College of Veterinary Surgeons. Price 1s.

Deafness. (See Ear.)

Deformities. The Nature and Treatment of Deformities of the Human Body. By LAMBERT H. ORMSBY, M.B. Dub., Surgeon to the Meath Hospital and Dublin Infirmary. Price 5s.

Deaf-mutism. On the Education of Deaf-mutes by Lip-Reading and Articulation. By Professor HARTMANN. Translated by Dr. PATTERSON CASSELLS. Price 7s. 6d.

"The instruction of deaf-mutes is here rendered easy."—*Athenæum*.

"We can honestly recommend it to anyone seeking for knowledge."—*The Lancet*.

Diagnosis.

Part I.—Aids to Semeiological Diagnosis. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 1s. and 1s. 6d.

Part II.—Aids to Physical Diagnosis. By J. C. THOROWGOOD, M.D., F.R.C.P. Lond. Price 1s. and 1s. 6d.

Part III.—What to Ask. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 1s. and 1s. 6d.

"A mine of valuable information."—*Edinburgh Medical Journal*.

Diagnosis. The Physiological Factor in Diagnosis. By the same Author. Second Edition. Price 7s. 6d.

"This is an exceedingly clever and well written book, put together in a very plain, practical, and taking way."—*Edinburgh Medical Journal*.

Diphtheria. Diphtheria, its Causes, Pathology, Diagnosis, and Treatment. By R. HUNTER SEMPLE, M.D., F.R.C.P. Lond., Physician to the Hospital for Diseases of the Throat and Chest. Second edition, price 2s. 6d.

Diseases.—The Classification and Nomenclature of Diseases. By A. RABAGLIATI, M.A., M.D., Senior Surgeon Bradford Infirmary, Surgeon to the Children's Hospital. Price 2s. 6d.

Diseases. The Salisbury Plans of Treatment by Alimentation of the Various Diseases produced by Unhealthy and Indiscreet Feeding. By J. H. SALISBURY, M.D. Price 2s. 6d.

Domestic Medicine. Handbook of Popular Medicine for family instruction, colonists and others out of reach of medical aid. By G. H. NAPHEYS, A.M., M.D. With movable plate and 100 illustrations. Price 7s. 6d.

Ear. Text-book of the Diseases of the Ear and adjacent Organs. By Professor POLITZER, of Vienna. Translated by JAMES PATTERSON CASSELLS, M.D., Consulting Physician to the Glasgow Ear Infirmary. Price 21s.

"Dr. Cassells has done good service to English readers, by furnishing them with so excellent a translation."—*Lancet*.

"The work of a recognised master."—*British Medical Journal*.

Ear. On Vascular Deafness. By ROBERT J. COOPER, M.D., Trinity College, Dublin. Price 3s. 6d.

Ear. Otorrhœa; or, Discharge from the Ears: Causes and Treatment. By W. DOUGLAS HEMMING, F.R.C.S. Ed. Price 1s.

Etiquette. A few Rules of Medical Etiquette. By a L.R.C.P. Lond. Price 1s.

Examinations. Aids to Examinations. By W. D. HEMMING, F.R.C.S. Ed., and H. AUBREY HUSBAND, M.B., F.R.C.S. Being Questions and Answers on Materia Medica, Medicine, Midwifery, Pathology, and Forensic Medicine. Price 1s. 6d. cloth, 1s. paper.

Examinations. A Guide to the Examinations at the Royal College of Surgeons of England for the Diplomas of Member and Fellow, with Examination Papers. By F. J. GANT, F.R.C.S., Author of the "Science and Practice of Surgery." Fifth edition, revised and enlarged. Price 4s. 6d.

"In truth a most useful Guide to the Examinations."—*Guy's Hospital Gazette*.

Examinations. A Guide to the Examinations of the Apothecaries' Society of London, with Questions, Tables on Materia Medica, etc. By W. E. DAWSON, L.S.A. Second edition. Price 2s. 6d.

"May be studied with great advantage by a student, shortly before presenting himself for examination."—*British Medical Journal*.

Examinations. The Irish Medical Students' Examiner. The Examination Questions in General Education and in the Medical Student's Course at the University of Dublin, Royal University, King and Queen's College of Physicians, Royal College of Surgeons, and Army and Navy Competitions. Price 2s. net.

Examinations. Examination Questions on the Medical Sciences, including the Army, Navy and University Examinations. Selected and arranged by JAMES GREIG LEASK, M.B. Abdu. Second edition. Price 2s. 6d.

"Dr. Leask's questions are particularly suitable for pure examination study. Students should test themselves thereby."—*British Medical Journal*.

Examination Cards: Questions and Answers. By A. T. SCHOFIELD, M.D., 1d. each. Pathology, 2 sets, 1s. 6d. Minor Surgery, Bandaging, etc., 9d.

Eye. Student's Guide to Diseases of the Eye (Aids Series). By J. HUTCHINSON, jun., F.R.C.S., Ophthalmic Surgeon to the Great Northern Hospital. (*In the press.*)

Eye. The Cure of Cataract and other Eye Affections. By JABEZ HOGG, M.R.C.S., Consulting Surgeon to the Royal Westminster Ophthalmic Hospital. Third edition. Price 2s. 6d.

Eye. On Impairment or Loss of Vision from Spinal Concussion or Shock. By the same Author. Price 1s. 6d.

Eye. The Functions of Vision and its Anomalies. By Dr. GIRAUD TEULON. Translated by LLOYD OWEN, F.R.C.S.I., Surgeon to the Midland Eye Hospital, Ophthalmic Surgeon to the Hospital for Sick Children Birmingham. Price 5s.

Eye. Movable Atlas of the Eye and the Mechanism of Vision. By Prof. G. J. WITKOWSKI. Price 7s. 6d. (See Anatomy.)

Eyes. **Mind your Eyes.** By F. SARCEY. Translated for the National Society for the Prevention and Cure of Blindness. Price 2s. 6d.

Eyes. The Causes and Prevention of Blindness. By Dr. FUCHS, Professor of Ophthalmology in the University of Liege. Price 7s. 6d.

Eyes. How to Preserve the Sight. By Dr. MAGNÉ. Translated for the National Society for the Prevention and Cure of Blindness. Price 6d.

Eyes. On Spectacles, their History and Uses. By Prof. HORNER. Issued by the National Society. Price 6d.

Fasting and Feeding, Psychologically considered. By L. S. FORBES WINSLOW, M.B. Cantab., D.C.L. Oxon. Price 2s.

Fever. On the Endemic Hæmaturia of Hot Climates, caused by the presence of Bilharzia Hæmaturia. By F. H. H. GUILLEMARD, M.A., M.D., F.R.G.S. Price 2s.

Food. Aids to the Analysis of Food and Drugs. By H. AUBREY HUSBAND, M.B., F.R.C.S., Lecturer on Public Health, in the Edinburgh Medical School. Price 1s. 6d., cloth; 1s. paper.

Food. The Healthy Manufacture of Bread. By B. W. RICHARDSON, M.D., F.R.S. Price 6d., paper cover ; cloth 1s., with Vignette.

Foot. Movable Atlas of the Foot; its Bones, Muscles, etc. By Prof. WITKOWSKI. Price 7s. 6d. (See Anatomy.)

Forensic Medicine. The Student's Handbook of Forensic Medicine and Public Health. By H. AUBREY HUSBAND, M.B., F.R.C.S. E. Fifth Edition. Price 10s. 6d.

Forensic Medicine. Aids to Forensic Medicine and Toxicology. By W. DOUGLAS HEMMING, F.R.C.S. E., and H. AUBREY HUSBAND, M.B., F.R.C.S. E. Fifth thousand, price 2s. 6d. cloth, 2s. paper.

Geology. Field Geology, with a Section on Palæontology. By W. HY. PENNING, F.G.S., of H.M. Geological Survey, and A. J. JUKES-BROWNE, B.A., F.G.S. With woodcuts and coloured map. Second edition, revised and enlarged, price 7s. 6d.

"Others have taught us the principles of the science, but Mr. Penning, as an accomplished field-geologist, introduces us to the practice."—*The Academy*.

Geology. Engineering Geology. By the same Author. Illustrated with coloured maps and woodcuts, price 3s. 6d.

"A full and lucid description of surveying and mapping, the diagnosing of the various minerals met with, the value of sites, rocks, etc."—*Popular Science Review*.

Geometry. I. Aids to Analytical Geometry. The Straight Line and Circle. By A. LE SUEUR, B.A., Cantab. Price 2s.

II. The Conic Sections, with solutions of questions set at the London University and other Examinations by GEORGE HEPPEL, M.A. Cantab. Price 2s.

Gout. A Treatise on Gout. By AUSTIN MELDON, M.K.Q.C.P., F.R.C.S.I., Senior Surgeon Jervis Street Hospital, Consulting Physician Dublin General Infirmary. Tenth edition, price 2s. 6d.

Gout. The Nature and Treatment of Gout. By Professor EBSTEIN of Gottingen University. Translated by J. E. BURTON, L.R.C.P. Lond. Price 3s. 6d.

Gymnastics. A Short Sketch of Rational Medical Gymnastics ; or, the Movement-Cure. By M. ROTH, M.D., F.R.C.S. Eng. With thirty-eight engravings, price 1s.

BY THE SAME AUTHOR.

The Prevention and Cure of Many Chronic Diseases by Movements. With 90 engravings, price 10s.

Contribution to the Hygienic Treatment of Paralysis, and of Paralytic Deformities. Price 3s. 6d.

On Paralysis in Infancy, Childhood, and Youth, and on the Prevention and Treatment of Paralytic Deformities. 3s. 6d.

The Prevention and Rational Treatment of Lateral Spinal Curvature. (Gold Medal of the International Health Exhibition, 1884.) 200 engravings. Price 5s.

Gynæcology. The Diseases of Women and their Treatment. By H. MACNAUGHTON JONES, M.D., F.R.C.S.I., F.R.C.S.E., Examiner in Midwifery, Royal College of Surgeons, Ireland. Third edition. Illustrated, price 9s.

"The work of a mature and experienced authority."—*British Medical Journal*.

"Of exceptional merit drawn from a field of wide personal experience."—*Medical Press*.

Gynæcology. Aids to Gynæcology. By ALFRED S. GUBB, M.R.C.S., L.R.C.P., Obstetric Assistant and Gold Medallist Westminster Hospital. Cloth 1s. 6d., price 1s.

Hay Fever : its Causes, Treatment, and Effective Prevention ; Experimental Researches. By CHAS. HARRISON BLACKLEY, M.D. Second edition, revised and enlarged, price 10s. 6d.

"A piece of real honest work, original and instructive."—*Lancet*.

"We recommend it cordially to all who may wish for a practical work on this once mysterious disease."—*Medical Times*.

Hand. Movable Atlas of the Hand ; its Bones, Muscles and Attachments. By Prof. WITKOWSKI. Price 7s. 6d. (See Anatomy.)

Heart. On Insufficiency of Aortic Valves in Connection with Sudden Death. By JOHN COCKLE, A.M., M.D., F.R.C.P., Physician to the Royal Free Hospital. Second edition, price 2s. 6d.

Heart. Contributions to Cardiac Pathology. By the same Author. Price 2s. 6d.

Heart. An Essay on Fatty Heart. By HENRY KENNEDY, A.B., M.B. Physician to the Whitworth Hospitals. Price 3s. 6d.

"We have no hesitation in recommending it as a most valuable contribution to the literature of the all-important subject of which it treats."—*Medical Press*.

Histology. Introduction to Practical Histology. By GEORGE THIN, M.D. Price 5s.

"No more valuable text-book for the student will be found, nor one containing a greater amount of useful information."—*Medical Press*.

Hydrophobia. Inoculation for Rabies and Hydrophobia. A Study of the Literature of the subject. By Surgeon-General C. A. GORDON, C.B. Price 2s. 6d.

Hydrophobia. Comments on the Reports of the Committee on M. Pasteur's Treatment. By Surgeon-General C. A. GORDON, M.D., C.B. Price 2s. 6d.

Hydrophobia. The Disease as it appears in Man. By HORATIO R. BIGELOW, M.D. Price 5s.

Hygiene. Lessons in Military Hygiene and Surgery, from the Franco-Prussian War. Prepared on behalf of Her Majesty's Government. By Surgeon-General GORDON, M.D., C.B., Hon. Physician to the Queen. Illustrated, price 10s. 6d.

"A treatise of exceptional merit, drawn from personal experiences in the greatest war of modern times."—*Army and Navy Gazette*.

Hygiene. A Manual of Sanitation ; or, First Help in Sickness and when Wounded. Alphabetically arranged pocket companion. By the same Author. Second Ed., cloth, 2s. 6d., sewn, 1s.

"It is a most useful and practical manual, and, as the instructions are simple and reliable, it should be placed in the hands of officers and men alike."—*The Graphic*.

Hygiene. The Elements of School Hygiene for the Use of Teachers and Schools. By W. E. ROTH, B.A. Price 3s. 6d.

Hygiene. Theatre Hygiene, a study of a somewhat neglected department of public health, in construction, safety and healthy arrangement. By WALTER E. ROTH, B.A. Oxon. Price 1s. 6d.

Hygiene. Healthy Homes. By STANLEY HAYNES, M.D., M.R.C.S., F.R.G.S. Price 1s.

Hygiene. Notes on Nuisances, Drains, and Dwellings. By W. H. PENNING, F.G.S. Second edition, price 6d.

Hygiene. Short Lectures on Sanitary Subjects. By RICHARD J. HALTON, L.K.Q.C.P., L.R.C.P. Ed., L.R.C.S.I., etc., Medical Officer of Health to Kells. Price 5s.

"A book well adapted to popular reading, and replete with sound knowledge promotive to good health and long life."—*Sanitarian*.

Hygiene. A Manual of Naval Hygiene, with Instructions and Hints on the Preservation of Health and the Prevention of Disease on board Ship. By JOSEPH WILSON, M.D., Medical Director of the United States Navy. Second edition, price 10s. 6d.

Hygiene. The Sanitation of Public Institutions. The Howard Prize Essay. By R. D. R. SWEETING, M.R.C.S., Medical Superintendent of the Western Fever Hospital. Price 3s. 6d.

India. Experiences of an Army Surgeon in India. The Treatment of Wounds, Injuries and Diseases incidental to a Residence in that Country. By Surgeon-General GORDON, M.D., C.B., Hon. Physician to the Queen. Price 3s. 6d.

International Medical Congress. The Commemorative Portrait-Picture of the International Medical Congress, 1881. Illustrating this most memorable gathering of Medical Men. Designed and executed by Mr. BARRAUD ; nearly 700 Likenesses of Members, representing Medicine and Surgery in every part of the world ; special sittings accorded for every Portrait.

The Picture is Printed by the New Permanent Carbon Process in two Sizes :—

EXTRA SIZE, 47 × 30, MOUNTED, BUT UNFRAMED	£7 10s.	FRAMED -	£10 0s.
POPULAR SIZE, 29 × 20, MOUNTED, BUT UNFRAMED	£3 3s.	FRAMED -	£4 10s.

Kidneys. Vaso-Renal Change *versus* Bright's Disease. By J. MILNER FOTHERGILL, M.D. Edin., Physician to the City of London Hospital for Diseases of the Chest, etc. Price 7s. 6d.

Kidneys. Bright's Disease of the Kidneys. By Professor J. M. CHARCOT. Translated by H. B. MILLARD, M.D., A.M. Revised by the Author, with coloured plates, price 7s. 6d.

"We doubt very much if there exists in the English language any monograph in which the various forms are so accurately and concisely described."—*Medical Press*.

Lunacy. Handbook for the Instruction of Attendants on the Insane. Prepared by a Committee of the Medico-Psychological Association. With Appendix containing Lists of Asylums and Licensed Houses. Price 2s.

Materia Medica. Comprising the Drugs contained in the Schedule issued by the Conjoint Board of Examiners of the Royal College of Physicians and Surgeons. Arranged by MAURICE WILLIAMS, Principal of the City School of Chemistry and Pharmacy. Price 3s. 6d.

Materia Medica. Tables and Notes on Dispensing. By JAMES HENRY ALLAN, F.C.S., Royal Infirmary, Liverpool. Price 3s. 6d.

Materia Medica. A Key to Organic Materia Medica. By JOHN MUTER, Ph.D., M.A., F.C.S., President of the Society of Public Analysts. Third edition, price 12s. 6d.

Materia Medica. Aids to Materia Medica and Therapeutics. By C. E. ARMAND SEMPLE.

Part I.—The Non-metallic and Metallic Elements, Alcoholic and Ethereal Preparations, etc. Cloth 2s. 6d., paper 2s.

Part II.—The Vegetable and Animal Substances. 2s. 6d., 2s.

Part III.—Classification of Remedies. Cloth, 1s. 6d., paper, 1s.

Part IV.—New Remedies of the British Pharmacopœia. Cloth 2s. 6d., paper 2s.

Part V.—Tablets of Materia Medica. Price, cloth 1s. 6d., paper 1s.

Materia Medica and Pharmacy. A Text-Book for Medical and Pharmaceutical Students preparing for Examination. By W. HANDSEL GRIFFITHS, Ph.D., F.C.S., F.R.C.P. Ed. Third edition. Edited by A. S. GUBB, L.R.C.P. Lond., M.R.C.S., Gold Medallist, Prizeman in Materia Medica, Westminster Hospital. Price 7s. 6d.

"A book of great value . . . a standard text-book."—*Edin. Med. Journal*.

"One of the ablest, if not the best, work on the subject in our language."—*Med. Press*.

Materia Medica. Notes on Inorganic, and its Chemistry. By J. SCHÜTZ SHARMAN. Second edition. Price 1s. 6d.

Medical Education. Medical Education and Organization. The Hunterian Oration for 1880. By WALTER RIVINGTON, B.A., M.B., F.R.C.S., Surgeon to the London Hospital. Price 1s.

Medical Etiquette. A Few Rules of Medical Etiquette. By a L.R.C.P. Lond. Price 1s.

Medical Laws. The Laws Relating to Medical Men. By JAMES GREENWOOD, Barrister-at-Law. Price 5s.

"It will meet with the success which it really deserves."—*Edinburgh Medical Journal*.

"Admirably suited as a guide to the busy practitioner, who frequently runs great risks of becoming involved in legal penalties, in consequence of an imperfect knowledge of the law."—*Glasgow Medical Journal*.

Medical Profession. A Guide to the Medical Profession in all its branches, including the Public Services. By C. R. B. KEETLEY, F.R.C.S. ; Second Edition, revised and enlarged with the assistance of ROBERT WHARRY, M.D. Price 3s. 6d.

Medical Profession. The Medical Profession: the First Carmichael Prize for 1879. By WALTER RIVINGTON, B.A., M.B., F.R.C.S. Price 6s.

By same author and on same subject. The First Carmichael Prize Essay for 1887. Price 15s.

Medical Profession. The Medical Profession in 1879: the Second Prize Essay. By THOMAS LAFFAN, L.K.Q.C.P.I., M.R.C.S. Ed., Price 4s.

By same author and on same subject. The Second Carmichael Prize Essay for 1887. Price 7s. 6d.

Medical Profession. Medical Men and Manners of the Nineteenth Century. By a Physician. Third Thousand, price 3s.

"At times scathing, at others amusing, the author is never dull, and writes as one who knows the many blots on our system, and honestly tries to remedy them."—*Medical Press*.

"A most amusing satire, brimful of humour even when dealing with unpleasant facts."—*Students' Journal*.

Medical Reform. A Letter to the Right Hon. A. J. Mundella, M.P. By JAMES GREY GLOVER, M.D. Edin. Price 1s.

Medical Reform. The General Medical Council: Whom it Represents, and How it should be Reconstructed. By ARCHIBALD HAMILTON JACOB, M.D. Dub., F.R.C.S., Surgeon-Oculist to His Excellency the Lord Lieutenant, Professor of Ophthalmic Surgery in the Royal College of Surgeons, Ireland. Price 1s.

Medicine. Aids to Medicine. By C. E. ARMAND SEMPLE, B.A., M.B., Cantab., M.R.C.P. Lond.

Part I.—General Diseases. Price 2s. 6d. and 2s.

Part II.—The Urine, Kidneys, Stomach, Peritoneum, Throat, and Œsophagus. Third Thousand, price 2s. 6d. and 2s.

Part III.—Diseases of the Brain, Nervous System, and Spinal Cord. Third thousand, price 2s. 6d. and 2s.

Part IV.—Fevers, Skin Diseases. Price 2s. 6d. and 2s.

Medicine. A Chronology of Medicine from the Earliest Times.
By J. MORGAN RICHARDS. Price 10s. 6d.

Medicine. Student's Handbook of the Practice of Medicine. By
H. AUBREY HUSBAND, M.B., C.M., B.Sc. Fourth edition revised
and enlarged. Illustrated. Price 7s. 6d.

Medico-Military Services. Our Services under the Crown. A
Historical Sketch of the Army Medical Staff. By Surgeon-
Major A. GORE, M.D., Sanitary Officer on the Staff. Price 6s.

Memory. Its Logical Revelations and Cultivation. By F. W.
EDRIDGE GREEN, M.B., B.S., Durham, M.R.C.S., L.R.C.P. Lond.
Price 6s.

Meteorology. The Moon and the Weather: the probability of
Lunar Influence reconsidered. Showing how storms and
depressions may be predicted. By WALTER J. BROWNE (St.
Petersburg). Second edition, price 3s.

Microbes, in Fermentation, Putrefaction, and Disease. By CHAS.
CAMERON, M.D., LL.D., M.P. Price 1s.

Professor Tyndall, F.R.S., writes :—" Matthew Arnold himself could not find fault with its
lucidity, while as regards knowledge and grasp of the subject I have rarely met its equal."

Microscope. A Compendium of Microscopical Technology, the use
of the Microscope in the preparation of Histological and Patho-
logical Specimens. By CARL SEILER, M.D., of the Academy
of Natural Sciences, Philadelphia. Price 5s.

Microscopical Science. The Journal of Microscopy and Natural
Science. Edited for the Postal Microscopical Society by
ALFRED ALLEN. Quarterly with plates. Price 1s. 6d.

Midwifery. The Principles and Practice of Midwifery and Diseases
of Women. By ALEXANDER MILNE, M.D., Vice-president of
the Obstetrical Society of Edinburgh. Second edition, price
12s. 6d.

Mind. The Training of the Mind for the Study of Medicine. A
Lecture delivered at St. George's Hospital. By ROBERT BRUDE-
NELL CARTER, F.R.C.S., Surgeon to the Hospital. Price 1s.

"A remarkable address."—*The Lancet*.

"No one can read it without learning and profiting much."—*Students' Journal*.

Morals. A Physician's Sermon to Young Men. By WILLIAM
PRATT, M.A., M.D., etc. Eighth thousand, price 1s. cloth.

"The delicate topic is handled wisely, judiciously, and religiously, as well as very plainly."
—*The Guardian*.

Mineral Waters. The Mineral Waters of Europe. A complete Analytical Guide to all the Bottled Waters, and their Medicinal and Therapeutic Values. By PROFESSOR TICHBORNE, LL.D., F.C.S., President of the Pharmaceutical Society of Ireland, and M. PROSSER JAMES, M.R.C.P., Lond., Lecturer on Therapeutics, London Hospital. Price 3s. 6d.

"Such a book as this is simply invaluable."—*The World*.

"This admirable and concise hand-book meets a very pressing want."—*Athenæum*.

Morals. Revelations of Quacks and Quackery. A Directory of the London and Provincial Quack Doctors; with Facts and Cases in Illustration of their Nefarious Practices. By "DETECTOR." Thirtieth thousand, price 2s.

Nerve Supply. Atlas of Cutaneous Nerve Supply. By JACOB HEIBERG, M.D., and W. W. WAGSTAFFE, F.R.C.S., containing 10 plates in colours. Price 4s. 6d.

New Remedies. A Summary of: their Physiological Action and Therapeutic Uses. By THOS. M. DOLAN, M.D. Price 2s. 6d.

Nursing. How to Feed an Infant. With an Appendix on the Common Ailments of Infancy, with their Hygienic and Curative Treatment. By BENSON BAKER, M.D. Price 1s. 6d.

"Popularly written, and sensible in the highest degree, its widespread perusal would help to bring about a more rational system of bringing up infants."—*Graphic*.

Nursing. How to bring up Children by Hand. By J. FOSTER PALMER, L.R.C.P. Price 6d.

Nursing. Practical Guide for the Young Mother. From the French of Dr. BROCHARD, Director-General of Nurseries and Crèches, with Notes and Hints by a London Physician. Price 2s.

Obstetrics. Aids to Obstetrics. By SAMUEL NALL, M.B. Cantab., M.R.C.P. Lond., First Class Honours Nat. Sci. Cambridge, Resident Obstetric Assistant, St. Bartholomew's Hospital. Sixth thousand. Price 2s. 6d. cloth, 2s. paper wrapper.

Obstetrics. On Fibrous Tumours of the Womb: their Pathology, Diagnosis and Treatment. By C. H. F. ROUTH, M.D., M.R.C.P. Lond., Senior Physician to the Samaritan Hospital. Price 3s. 6d.

Obstetrics. Hints for the use of Midwives preparatory to their Examinations. By R. J. MAITLAND COFFIN, F.R.C.P. Ed. Price 1s.

Old Age. The Diseases of Sedentary and Advanced Life. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 7s. 6d.

Osteology. Osteology for Students, with Atlas of Plates. By ARTHUR TREHERN NORTON, F.R.C.S., Surgeon to, and Lecturer on Surgery at, St. Mary's Hospital. Atlas and Text in one volume, 7s. 6d. ; in two volumes, 8s. 6d.

"The handiest and most complete hand-book of Osteology."—*The Lancet*.

"Artistic in design and praiseworthy in general plan."—*Edinburgh Medical Journal*.

Overwork. Overwork and Premature Mental Decay: its Treatment. By C. H. F. ROUTH, M.D., M.R.C.P. Lond. Fourth edition. Price 2s. 6d.

Pathology. Handbook of Medical Pathology. Being Lectures delivered at the London Hospital during the Session 1886. By H. G. SUTTON, M.B., F.R.C.P. Lond., Physician to, and Lecturer on Pathology at, the London Hospital. Price 5s.

"There is not a page that is not readable, and often one meets with a phrase or sentence that deserves to be recorded as an aphorism, embodying in a few words the sum and substance of a pathological idea. Such a work is to be accepted with gratitude for the thoughts it contains, and the facts on which they are based."—*The Lancet*.

Pathology Examination Cards. Arranged as questions and answers for self-examination. By A. T. SCHOFIELD, M.D., M.R.C.S. Complete in two sets of cards, price 9d. nett per set.

Mr. Jonathan Hutchinson, F.R.C.S., writes: "It is an invaluable means of self tuition."

Pharmacopœia. The Pocket Pharmacopœia. A Précis of the British Pharmacopœia, including the Therapeutical Action of the Drugs, their Natural Orders and Active Principles. By C. ARMAND SEMPLE, M.D., M.R.C.P. Price 3s. 6d.

Pharmacy. Latin Grammar of Pharmacy, for the use of Students, with an Essay on Latin Prescriptions. By JOSEPH INCE, A.K.C.L., formerly Examiner and Member of Council, Pharmaceutical Society. Third Edition with appendix. Price 4s.

Pharmacy. Aids to Pharmacy. By C. E. ARMAND SEMPLE, B.A. M.B., Cantab., M.R.C.P., Lond., Examiner in Arts at the Apothecaries' Hall, cloth, price 2s. 6d. ; paper wrapper 2s.

Pharmacy. A Treatise on Pharmacy. A Text-book for Students, and a Guide for the Physician and Pharmacist. By EDWARD PARRISH. Fifth edition, revised by T. S. WIEGAND, F.C.S. With 300 illustrations, half-bound morocco, price 30s.

"There is nothing to equal Parrish's Pharmacy in this on any other language."—*Pharmaceutical Journal*.

Phimosis. Its Causes, Symptoms, and Treatment ; with a description of the ancient rite of circumcision. By L. H. ORMSBY, M.D., F.R.C.S.I., Lecturer on Clinical and Operative Surgery at, and surgeon to, the Children's Hospital, Dublin. Price 1s.

Physiology. Aids to Physiology. By B. THOMPSON LOWNE F.R.C.S., late Arris and Gale Lecturer, and Examiner in Physiology Royal College of Surgeons of England. Fourth thousand, illustrated. In two parts 2s. each, or in one vol., cloth, 4s. 6d.

"As 'aids' and not substitutes, they will prove of real value to students."—*Medical Press*.
"Certainly one of the best of the now popular 'Aid Series.'"—*Students' Journal*.

Physiology. The Physiologist in the Household. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Part I.—Adolescenc. Price 1s.

Physiological Chemistry. Aids to Physiological Chemistry. By J. L. THUDICHUM, M.D., F.R.C.P., Lond., St. Thomas's Hospital. Cloth, price 2s. 6d. Wrapper, 2s.

Physiological Factor in Diagnosis. By J. MILNER FOTHERGILL, M.D., M.R.C.P., Lond., Physician to the City of London Hospital for Diseases of the Chest. Second edition. Price 7s. 6d.

Physiological Laboratory. Manual for the Physiological Laboratory. By VINCENT HARRIS, M.D., M.R.C.P., Examiner in Physiology, Royal College of Physicians of London, and D'ARCY POWER, M.B. Oxon., Curator of Museum, St. Bartholomew's Hospital. Fourth edition, price 5s. 6d.

"This manual is already well and favourably known, and the new edition contains many valuable additions."—*Lancet*.

Polypus in the Nose and other Affections of the Nasal Cavity; their successful treatment. By J. L. W. THUDICHUM, M.D., F.R.C.P. Lond. Sixth edition. Price 1s.

Population. On the Evils, Moral and Physical, likely to follow, if practices, intended to act as checks to population, be not strongly discouraged and condemned. By C. H. F. ROUTH, M.D., F.R.C.P. Second thousand, price 1s.

Posology. Posological Tables: a Classified Chart, showing at a glance the Dose of every Official Substance and Preparation. By HANDSEL GRIFFITHS, Ph.D., L.R.C.P. Fifth edition, revised by PETER W. SQUIRE, F.L.S., F.C.S., price 1s.; or mounted on linen, rollers, and varnished, 3s. 6d.

Prescriptions. The Student's Pocket Prescriber. By H. AUBREY HUSBAND, M.B., F.R.C.S.E. Price 1s., cloth.

Public Health. The Practical Guide to the Public Health Acts and Correlated Acts, for Officers of Health and Inspectors of Nuisances. By THOS. WHITESIDE HIME, B.A., M.B. Leather, gilt edges, price 5s.

- Public Health.** Aids to Public Health. By J. L. THUDICHUM, M.D., F.R.C.P., Lond. Price 1s. 6d. cloth ; 1s. paper wrapper.
- Plant Analysis.** Quantitative and Qualitative. By G. DRAGENDORFF, Professor of Chemistry and Pharmacy in the University of Dorpat. Translated by HY. G. GREENISH, A.I.C. 7s. 6d.
- Rheumatism.** Its Treatment by Electric Massage, etc., in connection with the Wiesbaden Thermal Waters. By CARL MORDHORST, M.D. Kiel. Price 1s.
- Rupture of the Perineum.** Its Causes, Prevention and Treatment. By MICHAEL JOSEPH MOLONY, M.R.C.P.L., R.C.S. Price 2s. cloth, 1s. 6d. paper.
- Salt.** History of Salt, with Observations on its Medicinal and Dietetic Properties. By EVAN MARLETT BODDY, F.R.C.S., F.S.S., L.R.C.P. Price 2s. 6d.
- Sewage.** The Sewage Question: Reports upon the Principal Sewage Farms and Works of the Kingdom, with Notes and Chemical Analyses. By the late Dr. LETHEBY. Price 4s. 6d.
 "These Reports will dissipate obscurity, and, by placing the subject in a proper light, will enable local authorities, and others interested in the matter, to perceive the actual truths of the question, and to apply them practically."
- Skeleton.** Movable Atlas of the Skeleton and its Articulations, showing the Bones and Ligaments of the Human Body and Limbs. By Prof. WITKOWSKI. Price 7s. 6d. (See Anatomy.)
- Skin. Scabies:** its Causation, Diagnosis, and Treatment. By ARTHUR HARRIES, M.D., Physician to St. John's Skin Hospital. Price 6d.
- Skin.—Lupus.** A Pathological and Clinical Investigation. By ARTHUR HARRIES, M.D., and C. M. CAMPBELL, M.D. Price 1s.
- Skin.** Some Diseases of the Skin produced by derangements of the Nervous System. By T. STRETCH DOWSE, M.D., F.R.C.P.E. Price 2s.
- Skin.** Lectures on Ring-worm and other Diseases of the Skin, due to Vegetoid Parasites. By JAS. STARTIN, M.R.C.S. Price 1s.
- Sphygmograph.** The Sphygmograph: its History, and use as an aid to Diagnosis. By R. E. DUDGEON, M.D. Price 2s. 6d.
- Stricture.** Stricture of the Urethra: its Diagnosis and Treatment. By E. DISTIN MADDICK, F.R.C.S. Edin., late Surgeon R.N. 4s.

Surgery. The Science and Practice of Surgery, a Complete Text-book. By FREDERICK J. GANT, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Third edition, with full Indices and nearly 1,100 engravings, new and original, in 2 vols., price 36s.

With special chapters by

Wm. Adams, F.R.C.S., Deformities.

Robt. Barnes, M.D., F.R.C.P., Obstetrics.

Sir Morell Mackenzie, M.D., The Throat.

C. S. Tomes, F.R.S., Dental Surgery.

Malcolm Morris, F.R.C.S., The Skin.

Hy. Power, F.R.C.S., Ophthalmic Surgery.

Laidlaw Purves, M.D., Aural Surgery.

"The entire work has been revised, and made to present the modern aspects of Surgery."—*Lancet*.

"Marks a distinct epoch in the progress of Surgery."—*Hospital Gazette*.

"Does credit to the author's thorough surgical knowledge."—*British Medical Journal*.

"A very complete and trustworthy guide to practice."—*Medical Times*.

Surgery. Aids to Surgery. By GEORGE BROWN, M.R.C.S. Parts I. and II., price 1s. 6d. and 1s. each.

Surgery. The Text-book of Operative Surgery. With 88 beautifully engraved steel plates, after BERNARD and HUETTE. Text by ARTHUR TREHERN NORTON, F.R.C.S., Surgeon to, and Lecturer on Surgery at, St. Mary's Hospital. Second Edition, half calf, plain, 25s.; hand coloured, 50s.

"Of the highest merit as a guide to operative surgery."—*Students' Journal*.

Surgery. Annals of Surgery. A monthly Review of Surgical Science and Practice, published simultaneously in America and London. Edited by L. S. PILCHER, M.D., of Brooklyn, and C. B. KEETLEY, F.R.C.S., of London. Price 2s. monthly, or 21s. per annua post free.

Surgery. The Anatomy of Surgery. By JOHN McLACHLAN, M.B., M.R.C.S. With 74 illustrations. Price 10s. 6d.

Surgery, Minor—and Bandaging. Cards for Self-examination by means of Questions and Answers. Arranged by A. T. SCHOFIELD, M.D. Price 9d. nett.

Surgical Operations. Chart of Instruments and Appliances required. By C. H. ORMSBY. Price 2s. 6d., or mounted on linen, varnished, with rollers, 7s. 6d.

Surgical Treatment. Notes on Surgical Treatment and Minor Operations. Designed especially for House Surgeons and Students. By T. F. HOPGOOD, L.R.C.P., M.R.C.S. Surgeon to the Sunderland Infirmary. Price 2s. 6d.

Syphilis. The Nature and Treatment of Syphilis and the other so-called Contagious Diseases. By C. R. DRYSDALE, M.D., M.R.C.P., Lond., F.R.C.S. Eng. Fifth edition. Price 5s.

Teeth. Dental Caries and the Prevention of Dental Caries. By HENRY SEWILL, M.R.C.S. and L.D.S. Eng. Second edition. Price 2s. 6d.

Teeth. Aids to Dental Surgery. By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S. Eng. Price 2s. 6d. cloth ; 2s. paper.

Temperature Charts for Recording the Range of Temperature, Pulse, Respiration, History, Progress, and Treatment of Cases, By E. W. MOORE, M.D., M.R.C.P. Price 1d. each, 9d. per dozen, or mounted, similar to a blotting-pad, 50, 3s. 6d.; 100, 7s.

Theories of Disease. The Germ Theories of Infectious Diseases. By JOHN DRYSDALE, M.D., F.R.M.S., President of the Liverpool Microscopical Society. Price 1s.

Theories of Disease. A Parasitic or Germ Theory of Disease: the Skin, Eye, and other affections. By JABEZ HOGG, M.R.C.S., Consulting Surgeon to the Royal Westminster Ophthalmic Hospital. Second edition, price 2s. 6d.

Theories of Life. The Protoplasmic Theory of Life. By JOHN DRYSDALE, M.D., F.R.M.S., President of the Liverpool Microscopical Society. Price 5s.

Theories of Life. How to Prolong Life? Showing the Diet and Agents best adapted for a lengthened prolongation of existence. By C. W. DE LACY EVANS, M.R.C.S. Second edition. Price 5s.

"A good account of the somatic changes which occur with the advance of age."—*The Lancet*.

Therapeutics. Modern Medical Therapeutics. Formulæ and Specific Therapeutical directions, from the practice of eminent Contemporary Physicians, English, American, and Foreign. By G. H. NAPHEYS, A.M., M.D. Ninth edition, price 18s.

"A summary of the best modes of treatment."—*Practitioner*.

"The volume will supply what many practitioners are often anxious to possess for reference in the practice of their art."—*Glasgow Medical Journal*.

Therapeutics. Modern Surgical Therapeutics. From the Practice of eminent contemporary Physicians and Surgeons. By G. H. NAPHEYS, A.M., M.D. Eighth edition, price 18s.

"Of much value to the surgeon and general practitioner."—*New York Medical Journal*.

"Invaluable to every practising physician."—*New York Medical Record*.

Therapeutics. The Principles and Methods of Therapeutics. From the French of ADOLPHE GUBLER, M.D., Professor of Therapeutics in the Paris Faculty of Medicine, price 18s.

Therapeutics. The Therapeutics of the Respiratory Passages. By PROSSER JAMES, M.D., Lecturer on Materia Medica and Therapeutics at the London Hospital. Price 10s. 6d.

"Dr. Prosser James has produced a scholarly treatise."—*New York Medical Record*.

"It must be pronounced as sound and good."—*Lancet*.

Therapeutics. Aids to Rational Therapeutics, for the guidance of Practitioners and Senior Students. By J. MILNER FOTHERGILL, M.D. Second edition. Price 2s. 6d., cloth; 2s., paper wrapper.

Throat. Movable Atlas of the Throat, and the Mechanism of Voice, Speech, and Taste. By Prof. WITKOWSKI. (See Anatomy.)

Throat. The Throat and its Diseases. A Practical Guide to Diagnosis and Treatment. With 160 typical illustrations in chromolithography and numerous wood engravings. By LENNOX BROWNE, F.R.C.S. Edin., Senior Surgeon to the Central London Throat and Ear Hospital. Second edition. Price 21s.

Throat. Affections of the Throat and Larynx. By ARTHUR TREHERN NORTON, F.R.C.S., Surgeon to St. Mary's Hospital. Second edition, illustrated, price 6s.

"Short, simple, and thoroughly practical instruction."—*Medical Times*.

Throat. Laryngoscopy and Rhinoscopy: in the Diagnosis and Treatment of Diseases of the Throat and Nose. With hand-coloured plates and woodcuts. By PROSSER JAMES, M.D., M.R.C.P. Fifth Edition. Price 6s. 6d.

Transactions of Societies. Transactions of the Academy of Medicine in Ireland. Published annually. Edited by WILLIAM THOMSON, M.A., F.R.C.S., with numerous plates and woodcuts. Vols. I. to V. (1883-7). Price 14s. each.

Transfusion. On Transfusion of Blood and Saline Fluids. By C. EGERTON JENNINGS, L.R.C.P., F.R.C.S., formerly House Physician and Resident Accoucheur at the London Hospital. Third edition, with Preface, by SIR SPENCER WELLS, Bart., 4s. 6d.

Urine. The Urine; a Guide to its Practical Examination. By J. TYSON, M.D., Professor of Morbid Anatomy in the University, and President of the Pathological Society of Philadelphia. Fifth edition, with numerous illustrations, price 7s. 6d.

"We think it the most practically useful guide we have on the subject."—*Medical Record*.

Urinary Diseases. Diseases of the Bladder, Prostate Gland, and Urethra. By F. J. GANT, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Fifth edition, enlarged. Price 12s. 6d.

- Ventnor and the Undercliff.** By J. M. WILLIAMSON, M.D. M.B. Edin., Hon. Surgeon to the National Hospital for Consumption. Second edition, price 1s.
- Vichy.** Vichy and its Therapeutical Resources. By PROSSER JAMES, M.D., M.R.C.P., Lond.; Lecturer on Materia Medica and Therapeutics at the London Hospital. Price 2s. 6d.
- Voice.** The Philosophy of Voice. Showing the right and wrong Action of the Breath and Vocal Cords in Speech and Song. By CHARLES LUNN. Sixth Edition. Price 3s.
- Voice.** Artistic Voice in Speech and Song. Dedicated to Mr. Sims Reeves and Mr. Santley. By the same Author. 1s.
- Voice.** The Voice Musically and Medically Considered. By C. ARMAND SEMPLE, M.B., Cantab., M.R.C.P., Lond., Physician to the Royal Society of Musicians. Part I. Musical, price 1s.; Part II., Medical, price 2s.; or in one vol., cloth, 3s. 6d.
- War.** A Romance of War; or, How the Cash Goes in Campaigning From the Evidence before the Committee of the House of Commons on the Egyptian Campaign. By CHARLES CAMERON, LL.D., M.P. Second Thousand. Price 1s.
- Whooping-Cough.** Its Pathology and Treatment. Fothergillian Prize Essay. By THOS. M. DOLAN, M.D., F.R.C.S.E. Price 3s. 6d.
- Zoology and Comparative Anatomy, Aids to.** By MAJOR GREENWOOD, M.R.C.S., L.R.C.P., Honours in Zoology, University of London. Price 2s. 6d., cloth, and 2s. paper.

THE STUDENTS' AIDS SERIES.

Specially designed to assist Students in committing to memory and grouping the subjects upon which they are to be examined.

Aids to Analysis of Food and Drugs. By H. AUBREY HUSBAND, M.B., F.R.C.S. Price 1s. 6d. cloth ; 1s. paper.

Aids to Anatomy. By GEORGE BROWN, M.R.C.S., Gold Medalist, Charing Cross Hospital. Price 1s. 6d. cloth ; 1s. paper

Aids to Botany. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P., Lond., late Senior Examiner in Arts at Apothecaries' Hall. Third Thousand. Price 2s. 6d. cloth ; 2s. paper wrapper.

Aids to Chemistry. By the same Author.

Part I.—Inorganic: Non-Metallic Substances. 2s. 6d. and 2s.

Part II.—Inorganic: The Metals. 2s. 6d. cloth ; 2s. paper.

Part III.—Organic. Price, cloth 2s. 6d.; paper 2s.

Part IV.—Tablets of Chemical Analysis. 1s. 6d., 1s.

Aids to Practical Chemistry. Especially arranged for the Analysis of Substances containing a Single Base and Acid Radicle. By T. HURD GORDON. Price 2s. 6d. cloth ; 2s. paper.

Aids to Dental Surgery. By ARTHUR S. UNDERWOOD, M.B., M.R.C.S., Lecturer on Dental Surgery at the Dental Hospital of London. Price 2s. 6d. cloth ; paper wrapper 2s.

Aids to Diagnosis. Part I.—Semeiological. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 1s. 6d. cloth ; 1s. paper.

Part II.—Physical. By J. C. THOROWGOOD, M.D., F.R.C.P. Lond. Price 1s. 6d. cloth ; 1s. paper wrapper.

Part III.—What to Ask. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 1s. 6d. cloth ; 1s. paper.

"A mine of valuable information."—*Edinburgh Medical Journal*.

Aids to Examinations. Being Questions and Answers on Materia Medica, Medicine, Midwifery, Pathology, etc. By W. DOUGLAS HEMMING, F.R.C.S., and H. AUBREY HUSBAND, M.B., F.R.C.S. Third thousand. Price 1s. 6d. cloth ; and 1s. paper.

Aids to Forensic Medicine and Toxicology. By W. D. HEMMING, F.R.C.S.E., and H. AUBREY HUSBAND, M.B., F.R.C.S.E. Third Thousand. Price 2s. 6d. and 2s.

Aids to Gynæcology. By ALFRED GUBB, M.R.C.S., L.R.C.P., Obstetric Assistant and Gold Medallist, Westminster Hospital. Cloth, price 1s. 6d. ; paper wrapper, 1s.

Aids to Materia Medica and Therapeutics. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond.

Part I.—The Non-Metallic and Metallic Elements, Alcoholic and Ethereal Preparations. 2s. 6d. cloth ; and 2s. paper.

Part II.—Vegetable and Animal Substances, 2s. 6d. and 2s.

Part III.—Classification of Remedies, 1s. 6d. and 1s.

Part IV.—New Remedies. 2s. 6d. and 2s.

Part V.—Tablets of Materia Medica. Price 1s. 6d. and 1s.

Aids to Medicine. By the same Author.

Part I.—General Diseases. Lungs, Heart, and Liver. Price 2s. 6d. and 2s.

Part II.—The Urine, Kidneys, etc. 2s. 6d., 2s.

Part III.—The Brain and Nervous System. 2s. 6d. and 2s.

Part IV.—The Fevers, Skin Diseases, &c. Price 1s. 6d. and 1s.

Aids to Obstetrics. By SAMUEL NALL, B.A., M.B., Cantab., M.R.C.P., Lond., late House Physician and Resident Obstetric Assistant, St. Bartholomew's Hospital. Price 2s. 6d., 2s.

Aids to Ophthalmic Medicine and Surgery. By JONATHAN HUTCHINSON, jun., F.R.C.S. *(In the press.)*

Aids to Pathology. *(In preparation.)*

Aids to Pharmacy. By C. E. ARMAND SEMPLE, B.A., M.B., Cantab., M.R.C.P., London. Cloth, price 2s. 6d. ; paper wrapper, 2s.

Aids to Physics. *(In preparation.)*

Aids to Physiology. By B. THOMPSON LOWNE, F.R.C.S., Examiner in Physiology, Royal College of Surgeons. Fourth thousand. In two parts price 2s. each, or in one vol., cloth, 4s. 6d.

"Certainly one of the best of the now popular Aids Series."—*Students' Journal*.

Aids to Practical Physiology. By J. BRINDLEY JAMES, M.R.C.S. Price 1s. 6d., cloth ; 1s., paper.

Aids to Physiological Chemistry. By J. L. THUDICHUM, M.D., F.R.C.P., Lond., formerly Lecturer on Physiological Chemistry, St. Thomas's Hospital. Price 2s. 6d. and 2s.

Aids to Psychological Medicine. By L. S. FORBES WINSLOW, M.B., D.C.L. Oxon. Price 1s. 6d. and 1s.

Aids to Public Health. By J. L. THUDICHUM, M.D., F.R.C.P., Lond. Price 1s. 6d. cloth, 1s. paper.

Aids to Surgery. In two parts. By GEORGE BROWN, M.R.C.S. Price 1s. 6d. and 1s. each.

Aids to Rational Therapeutics. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 2s. 6d. and 2s.

Replies to Questions in Therapeutics. By BRINDLEY JAMES, M.R.C.S. Price 1s. 6d. cloth, 1s. paper wrappers.

Aids to Zoology. By MAJOR GREENWOOD, M.D. Honours in Zoology, University of London. Price 2s. 6d., and 2s.

Aids to Analytical Geometry.

The Straight Line and Circle. By A. LE SUEUR, B.A. Cantab.

The Conic Sections, with solutions of questions set at the London and other University Examinations: By GEORGE HEPPEL, M.A., St. John's College, Cambridge, Member of London Mathematical Society.

WORKS IN VETERINARY MEDICINE AND SURGERY.

Amateur. Horses: their Rational Treatment and the Causes of their Premature Decay. By AMATEUR. Price 5s.

——— An Abridgment of the above. By the same Author. Price 1s.

Banham. Tables of Veterinary Posology and Therapeutics. With Weights, Measures, etc. For the use of Students and Practitioners. By GEORGE A. BANHAM, F.R.C.V.S. Price 2s. 6d.

Beacock. Prize Essay on the Breeding, Rearing, and Fattening of Cattle and Sheep, and proper treatment of Cows at time of Calving. By JOSEPH BEACOCK. Price 3d.

Burness—Mavor. The Specific Action of Drugs, an Index to their Therapeutic Value. By ALEXANDER G. BURNES and F. MAVOR, President of the Central London Veterinary Society. Price 10s. 6d.

Courtenay. The Practice of Veterinary Medicine and Surgery. By E. COURTENAY. Price 10s. 6d.

Fearnley. A Text-Book on the Examination of Horses as to Soundness. Lectures delivered at the Royal Veterinary College, Edinburgh. By Professor FEARNLEY, with an Appendix on the Law of Horses and Warranty. Price 7s. 6d.

"Free from technical terms, and eminently fit for every horse dealer's or owner's library."
—*Illustrated Sporting News*.

Fleming. A Text-Book of Veterinary Obstetrics, including the diseases and accidents incidental to pregnancy, parturition and early age in the Domesticated Animals. By GEORGE FLEMING, LL D., F.R.C.V.S., F.R.G.S., President of the Royal College of Veterinary Surgeons, Principal of the Army Veterinary Department. Profusely illustrated. Cloth, price 30s.

"Has filled up a void in a more satisfactory and complete way than any other member of his profession could have done."—*The Field*.

"No man who makes any pretensions to veterinary science or stock breeding can dispense with this work."—*Live Stock Journal*.

——— A Text-Book of Operative Veterinary Surgery. Part I., price 10s. 6d. Part II. (*In the Press*).

——— The Contagious Diseases of Animals: their influence on the wealth and health of the nation. Read before the Society of Arts. Price 6d.

- Fleming.** Animal Plagues; their History from the Earliest Times, Nature, and Prevention. Vol. I., to 1800, price 15s.
——— Vol. II., from A.D. 1800 to 1844. Price 12s.
——— Actinomykosis. An Infectious Disease of Animals and Mankind. Price 1s.
——— On Roaring in Horses (**Laryngismus Paralyticus**). Its History, Pathology and Treatment. With coloured plate and woodcuts. (*In the Press*)
——— Tuberculosis from a Sanitary and Pathological point of view. Price 1s.
——— Human and Animal Variolæ. A Study of Comparative Pathology. Price 1s.
——— Practical Horse Shoeing. With 37 illustrations. 2s.
——— The Influence of Heredity and Contagion on the Propagation of Tuberculosis. By G. FLEMING, F.R.C.V.S., HERR A. LYDTIN, and M. VAN HERTSEN. Price 6s.
- Gresswell.** A Manual of the Theory and Practice of Equine Medicine. By J. BRODIE GRESSWELL, M.R.C.V.S., and ALBERT GRESSWELL, M.R.C.S. Eng. Price 10s. 6d.
——— Equine Hospital Prescriber. By the same Authors. Price 2s. 6d.
——— Bovine Prescriber. Price 2s. 6d.
——— Veterinary Pharmacopœia. Materia Medica and Therapeutics. Price 10s. 6d.
- Heatley.** Practical Veterinary Remedies. A useful Handbook on Medicine. By G. S. HEATLEY, M.R.C.V.S. Price 3s. 6d.
- Hill.** Principles and Practice of Bovine Medicine and Surgery, with woodcuts and Coloured Plates. By J. WOODROFFE HILL, F.R.C.V.S. Price 36s.
- Lambert.** The Germ Theory of Disease, Concisely and Simply Explained. Illustrated by Diagrams and References to Important Diseases of Domestic Animals, etc. By JAMES LAMBERT, F.R.C.V.S., Army Veterinary Department. Price 1s.
- Liautard.** Animal Castration. By A. LIAUTARD, M.D. H.F.R.C.V.S. Price 7s 6d.
- McBride.** Anatomical Outlines of the Horse. By J. A. MCBRIDE, Ph.D., M.R.C.V.S. Third edition. With 8 coloured illustrations. Price 8s. 6d.

Meyrick. Stable Management and the Prevention of Diseases among Horses in India. By J. J. MEYRICK, C.B., F.R.C.V.S., Principal Army Veterinary Surgeon in Egypt. Formerly Superintendent of Horse Breeding for the Punjab. 2s. 6d.

Poyser. The Stable Management of Troop Horses in India. "The Collinsian" Prize Essay. By R. POYSER, F.R.C.V.S. Price 2s.

Reynolds. The Breeding, Rearing, and Management of Draught Horses. By RICHARD REYNOLDS, M.R.C.V.S. Price 3s. 6d.

Robertson. A Handbook of the Practice of Equine Medicine. By WM. ROBERTSON, F.R.C.V.S., late Principal of the Royal Veterinary College, London. Second edition shortly.

Smith. A Manual of Veterinary Hygiene. By FREDERICK SMITH, M.R.C.V.S., Army Medical Department, Lecturer on Veterinary Hygiene in the Army Medical School, Aldershot. Profusely illustrated. Price 10s. 6d.

Strangeways. Veterinary Anatomy. Third edition. By PROF. VAUGHAN, Lecturer on Anatomy and Zoology at the New Veterinary College, Edinburgh. Price 24s.

Walley. The Four Bovine Scourges: Pleuroneumonia, Foot and Mouth Disease, Cattle Plague, and Tubercle; with an Appendix on the Inspection of Animals and Meat. By THOS. WALLEY, F.R.C.V.S. Price 16s.

Veterinary Diagrams in Tabular Form. Illustrated with coloured and plain Engravings. Size of sheet $28\frac{1}{2}$ inches by 22 inches. Price per set of Five, 12s.; or mounted on roller and varnished, 27s.; or separately as follows:

No. 1.—The External Form and Elementary Anatomy of the Horse. Price 3s. 6d., or mounted on roller and varnished, 6s. 6d.

No. 2.—The Age of Domestic Animals. Price 2s. 6d., or mounted on roller and varnished 5s. 6d.

No. 3.—The Unsoundnesses and Defects of the Horse. Price 2s. 6d., or mounted on roller and varnished, 5s. 6d.

No. 4.—The Shoeing of the Horse, Mule and Ox. Price 2s. 6d., or mounted on roller and varnished, 5s. 6d.

No. 5.—The Elementary Anatomy, Points and Butcher's Joints of the Ox. Price 3s. 6d., or mounted, 6s. 6d.

The Veterinary Journal and Annals of Comparative Pathology. Monthly, price 1s. 6d. Annual Subscription 18s. prepaid. (Foreign postage extra.)

The Veterinary Surgeon's Diary, Note and Dose Book, including also the Acts and Orders of Council relating to the Profession. Annual price, 3s. 6d.

